



Climate Change Mixer

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Lesson at a Glance

Participant Read/Digest (10 min):

Participants will read perspective card(s) (human, species, or location) and prepare to represent the perspective(s) to others during the mixer activity.

Mixer Activity (30 minutes): Participants will read/represent and listen to other perspectives and complete a worksheet with prompts.

Conclusion and Reflection Questions

(Whole group, think/pair/share, or written; 10+ minutes): Participants will reflect on climate change, interpret the perspectives represented in the activity, and consider their own personal perspective/story of climate change.

Learner Outcomes

Participants will:

- Be able to voice perspectives on climate change.
- Understand how climate change impacts humans, species, and places.
- Express their own story/understanding of climate change and how it impacts their lives.

Getting Ready

Time: 45-60 minutes

Materials: Mixer perspective cards, printed reflection questions, materials for written reflection (optional)

Preparation: Spread mixer perspective cards out on a table/ground for participants to select

Location: Indoor or outdoor, with enough space for participants to move around; for a large group reflection, having a space for all participants to sit or stand in a circle.

Number of participants: 5-30

Objective: To promote understanding of the impacts of climate change on people, species, and places.

Participant Read/Digest (10 min)

Participants will choose or receive at least one identity card, representing either human perspectives on climate change, impacts on species, or changes to landscapes/places. After distributing roles, distribute name tags for participants to fill out, using the name of the person/species/location they are assigned. For those less familiar with expressing others' views, having a leader model what level of expression is expected can be very helpful in engaging the group. Participants will read the perspective they will be voicing and plan on how they will express the views represented; remind learners that they should be internalizing the perspective assigned to them, and memorizing as much of the information as possible.

Mixer Activity (30 minutes)

During the mixer, participants will engage with others and express the viewpoints on their cards, and/or their own experiences with climate change. There are several ways to facilitate this activity, depending on the level of comfort/experience/engagement of the group:

Facilitation Considerations

An important part of this lesson is preparing participants to respectfully voice perspectives — not only their own perspective but also that of another being (person, plant, animal, or place). Respectful dialogue is essential as participants are taking on the persona of someone with whom they may or may not share a background. It's important to acknowledge that many groups are stereotyped based on their identities and to set the expectation that stereotypes and disrespectful role play have no place in the learning environment. For recommendations on facilitating role play activities, visit this resource created by the Zinn Education Project (<https://www.zinnedproject.org/materials/climate-crisis-mixer>). Some key guidance to share with learners include:

- Speak using your own accent, language, and mannerisms
- Speak as if you are your assigned person/species/location
- Use I/we statements, and encourage participants to “become” their perspective

1. For less engaged groups, consider setting up a rotating structure (similar to “speed dating”) so participants have facilitated short bursts of engagement throughout the time.
2. For a moderately engaged group, consider setting a target of interacting with x number of “people,” y number of “places,” and z number of “species” to allow for greater autonomy but still have structure to encourage continuous engagement.
3. For a highly engaged group, consider a more self-directed approach, allowing participants to fully mix with each other for the duration of the activity. Encourage participants to talk 1:1 instead of in small groups- this encourages more interaction for all participants, and doesn’t allow for disengagement during the time.

For all groups, having a timekeeper who is rotating participants every 2-3 minutes can be very helpful. Ask participants to complete the “Questions to Answer During the Mixer” worksheet and make notes on the questions while they interact with others. Participants can also make notes on their emotional reactions, any larger themes that they identify, and what perspectives surprise them through these conversations.

Conclusion and Reflection Questions

(Whole group, think/pair/share, or written; 10+ minutes)

Facilitate some or all of the following questions:

1. If you had to write down a similar profile for yourself, your family, your school, or your community, what would that focus on? What is your climate change story?
2. What perspective did you hear that was new to you or that surprised you the most/least? How does this perspective compare to perspectives you’ve heard in the past?
3. Think about the news media and what you have heard about climate change in the popular media streams that you consume. How do those perspectives and voices align with the voices you’ve heard in this mixer?

4. How are people, places, and species connected in the conversation about climate change and biodiversity?
5. Public lands offer an opportunity to develop unique and large-scale solutions to some of the issues voiced by various perspectives in this mixer. What are some of the public land-based solutions that you heard or that you can think of after doing this activity?
6. Consider the human perspectives shared in this activity; is there someone that you could take joint action with? Who is this? What action might you take together? How would it support both their perspectives on climate change as well as your own personal one?

These questions can be facilitated in different ways. A common practice is “think/pair/share”, where learners first have a set amount of time to independently think about a question, then pair up with another person to talk about it, and then share out to the whole group. If you have a more engaged/confident group, jumping into a whole group reflection can also be an effective strategy. Written reflection can also be a valuable tool.

Lesson adapted from *A People’s Curriculum for the Earth*, ed. Bill Bigelow and Tim Swinehart; Rethinking Schools, 2014. Used by permission. See the Zinn Education Project for an updated version: <https://www.zinnedproject.org/materials/climate-crisis-mixer>

Adapt the lesson

- Find local species that have been affected by climate change and integrating those into the cards
- Have participants write their own perspectives on climate change and how it has affected them and use these in future lessons
- Have participants do a research project about one of the perspectives or ideas that surprised them in the perspectives represented



Art and Climate Change

Lesson at a Glance

Silent Gallery Walk (15 minutes):

Participants will look at and reflect on artwork related to climate change and biodiversity.

Questions, Reflections (10 minutes): Participants will discuss the work they've seen in small groups.

Data driven artwork discussion (10 minutes):

Participants will dive deeper into Jill Peltó's artwork, looking at examples of data-driven visual storytelling.

Data driven artwork (20+ minutes): Using the artistic style of Jill Peltó, participants will be able to create their own visualization of climate change.

Conclusion (5 minutes):

Final questions, comments, continuations.

Learner Outcomes

Participants will:

- Work with real data relevant to climate change or biodiversity loss and create an artistic piece
- Be introduced to three artist's work that is relevant to climate change, biodiversity loss, and public lands in the United States
- Reflect on how visual media can inspire awareness and action of climate change and biodiversity loss

Getting Ready

Time: 1 hour +

Materials: High quality printouts of climate change and/or biodiversity-related artwork, colored pencils, watercolors, pencils, blank white paper, tracing paper (optional), rulers, scissors, enough relevant data charts for each student, markers, chart paper if groups will be observing one art piece in a small group.

Preparation: Spread gallery walk images out on tables, with significant distance between them so that 3-5 people can look at each piece comfortably. Have art supplies and data charts easily accessible.

Location: A location with tables or other writing surfaces; preferably an outdoor pavilion or other space closely connected to nature.

Number of participants: 1-30 participants

Objective: To experience and create climate change advocacy through art.

Silent Gallery Walk (15 min)

A Silent Gallery Walk is a method for participants to engage with new material independently. Preface that you will be leading a discussion about questions, reflections, and observations participants have about the piece after the gallery walk. It can be helpful to set an expectation of how many "talking points" you want each person to have for this. Each piece of work has a short caption underneath it in the curriculum. You may choose to leave these visible during the initial gallery walk or to "reveal" them at a later time.

Introduce participants to the concept of a Gallery Walk by encouraging these guidelines:

1. Please be silent and keep your observations to yourself as you view the work. Each learner is experiencing this work in their own way — by remaining silent and observing the work, you are allowing your peers the opportunity to discover their own observations just as you are discovering the work yourself.
2. You may record your observations or curiosities on a piece of paper or in a notebook.
3. Try to spend at least two minutes with each piece; if you're highly engaged or excited by a piece, you may want to spend longer- this is natural. By spreading your time more evenly throughout all of the work, you may find connections to a piece you aren't initially drawn to.
4. As you visit each piece, try to maintain a few feet of physical distancing between yourself and others; this distancing can enhance your experience as well as theirs. If you notice the piece of work you were going to visit next has a crowd around it, change your strategy to visit another one they are representing. Have each group assign a note taker and a presenter.

Questions, Reflections (10 mins)

Guide participants in a reflective conversation about the artwork displayed. Begin with questions that allow for sharing of initial thoughts and reactions:

- *What did this make you think about?*
- *What do you think ties these pieces together?*
- *Why do you think we're looking at this body of work?*
- *How do you feel after viewing this work? What emotions came up for you during this exercise?*
- *What assumptions does this work challenge/reinforce?*

After initial reactions, offer the following questions to guide the group to a discussion about biodiversity, environmental justice, and climate change.

- *Where do you see climate change or biodiversity loss represented?*
- *Why did the artist say this piece was related to climate change? What do you see that links this work to climate change or biodiversity loss?*
- *What power structures does this work reinforce/break down?*
- *How did the artist create this work? What tools or techniques do you think the artist used?*

Data Driven Artwork Discussion (10 minutes)

Review Jill Pelto's artwork with the students. She creates pieces by taking climate data charts and using them to tell stories about the effects of climate change on the environment.

"Landscape of Change" uses four line graphs: sea level rise, glacier volume decline, increasing global temperatures, and the increasing use of fossil fuels. While the piece is from 2015, it tells a story that is relevant more today than ever. Ask participants if they can identify specific data lines.

"Gulf of Maine Temperature Variability" highlights the temperature fluctuation and temperature increase that sea water in the Gulf of Maine has experienced over the past 15 years; it also highlights the native species (codfish, lobsters, shrimp, and burrowing clams) that have been impacted by ocean acidification and depleted fish stocks. Ask students to consider what will happen to the people who rely on these species to provide for their families if this trend continues.

Creating data drive artwork (15+ minutes)

Ask participants to choose a dataset to create their own art in the style of Jill Pelto. Ideally, provide data charts related to local issues. There are several sources for global data available online:

- [wxshift](#)
- [climate.gov](#)

• [skepticalscience.com](#)

• [www.eia.gov/beta/states/states/mt/data/dashboard/renewables](#)

Participants can create art directly onto a graph they have printed or hand-drawn. They can also trace a graph onto a different piece of paper, especially if using paints. Participants can also use multiple datasets to make more complicated pieces. As participants create their own artwork, encourage them to consider including aspects of the environment, plant and animal species, and human interaction.

Conclusion (5 minutes)

Final questions, comments, continuations.

What story did you choose to tell with data, and why?

How did this activity increase your understanding of data, storytelling, and climate? Suggest if students are interested in contributing to data collection, they participate in a community science project!

What are ways of knowing that the climate is changing? What stories have you heard that the data supports or contradicts? Aside from numbers, how do communities know that change is happening?

Many Indigenous and Native communities have commented on climate change and how their traditional ways are at risk; yet these stories and commentary are not typically told in western scientific circles. How does this activity highlight other ways of knowing?

How does public land link to this activity? (Some links are: Data collection happening on public lands, imagery of public lands, science about biodiversity on public lands)

All artwork for this lesson used with permission from the artists.

Adapt the lesson

- For a highly engaged group, consider having participants self-select into small groups around the artwork displayed that they are especially interested in or drawn to. Ask participants to write down what they notice or wonder about the artwork, asking them to avoid statements that start with "I like" or "I don't like." Groups can present to the larger group.
- For an extended project, consider asking participants to collect their own data for several weeks or months prior to this activity and use it to create their artwork.
- Consider splitting into two lessons- the Silent Gallery Walk as part 1 and the Art Creation as part 2. Additionally, after participants create their own work, they could repeat the silent gallery walk process with their original pieces.