

The (Young) People’s Climate Conference

Teaching Global Warming to 3rd Graders

BY ROWAN SHAFER

THE ROOM WAS BUSTLING with 28 3rd graders diligently working in pairs and practicing their scripts for next week’s “People’s Climate Summit.” The 8- and 9-year-olds were discussing parts, devising props and costumes, and sounding out Bengali words and scientific terms.

“Ms. Shafer, what is a gla-ker?”

Paris, her partner Adrian, and I looked at their script and sounded out the word “glacier” together.

“I remember what a glacier is. That’s what’s melting in the North Pole!” Adrian exclaimed.

“Exactly, Adrian. But does your character live in the North Pole?”

“No, Nancy Tanaka lives in Oregon,” he responded. We looked at a map of North America. Most of my New Orleanian students hadn’t heard of Oregon before.

“I didn’t know we had glaciers, are they melting here too? Isn’t that bad?” Paris asked.

This was one moment, of many, when I wondered how to answer an 8-year-old.

When I began brainstorming this unit, the 2015 United Nations Climate Conference in Paris had just ended; I thought about how

I could use this significant event as a way to teach my students about climate change. Was this global concern too big and abstract to address with 3rd graders? How could I bring up an issue so complex, so gloom and doom? How could I not? I was concerned about how environmental issues are often taught to young children in a way that is artificially divorced from social concerns, and I felt learning about the pressing issue of climate change could not wait until my students were older.

I knew my students would have myriad experiences relating to this crucial topic, and that most of their knowledge wasn’t coming from school. In

Louisiana, there are pretty clear real-life examples of climate change negatively affecting my students in their own backyard. Changing weather patterns, sea levels, and temperatures influenced the magnitude of Hurricane Katrina; rapid coastal erosion — at the rate of a football field per hour — is compounded by rising sea levels and the continued destruction of wetlands for human use (including for the Gulf Coast oil industry); and “Cancer Alley”



Erik Ruin

is the nearby petrochemical industrial corridor in predominantly poor, African American communities between Baton Rouge and New Orleans.

While most white and middle-class children attend private schools in New Orleans, my public charter has prioritized creating an institution that reflects the diverse neighborhood around it. With a majority African American and low-income student population, and a full-inclusion model, my school is known as one of the most diverse public charters in the city. I wanted to not just teach what climate change is, but to frame it as a social and environmental justice issue my students could directly relate to and take action to change.

The inspiration for this unit came from Bill Bigelow’s article “Climate Change Mixer” in Rethinking Schools’ *A People’s Curriculum for the Earth*. In the introductory activity, each student takes on the role of someone affected by climate change and, walking around the room, meets people from the world as they tell their stories based on short autobiographies. I was inspired by the active, yet profound way high school students were learning about the climate crisis and believed my 3rd-grade students could too. I created a unit around a “People’s Climate Summit” in which 3rd graders would present mostly underrepresented voices of people around the world in a conference-like group performance. The conference was the culmination of students’ learning about the topic, and led to students taking action around Congress’ upcoming decision to adopt the U.N. agreement.

Setting the Stage

To begin this unit, I showed students a short clip from the U.N. conference panning all of the global leaders as they announced the agreement in various languages. “Hundreds of leaders who live in different places and speak different languages came together to make a decision about something that affects the whole world,” I explained. Animated

chatter stirred in the classroom; many students excitedly pointed out President Obama on the screen. “These leaders from around the world had a big decision to make about the whole Earth. But only the leaders from each country were there. Not everyone’s voices were heard,” I told them, setting up a scenario. “It is going to be your job, in the next month, to prepare for our own conference where you will represent regular people from all over the world. This is so important that you’re each going to get to write President Obama and tell him what you think he should do. But first, we need to learn about something called global warming.”

Big Issues, Small Kids

“Who knows what global warming is?” Some students had never heard the term before while others had a lot to share. They referenced pollution from cars and garbage, concerns about endangered species, and changing temperatures at the beach.

During the first half of this unit, I focused on providing the scientific background students needed in order to interact with the larger concepts of climate change (such as the composition of the Earth’s atmosphere and phases of matter). These were big, abstract ideas

for 3rd graders. The notion that the air around us is composed of different molecules, let alone that this is changing, was hard to grasp.

“The atmosphere is all around us, it’s the air we breathe. We can’t see it, but without it, humans, animals, and plants couldn’t live on Earth. It’s made up of tiny parts called molecules. Who’s heard of oxygen before?” Lots of hands shot up. “That’s one of the molecules! A really important one that plants breathe in is called carbon dioxide.” I used lots of visuals, including YouTube videos like *Climate Change for Kids* and *Climate Change (according to a kid)*, to help students understand the science behind global warming. The videos shied away from a lot of scientific vocabulary and instead used animated representations like

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color-coded cartoon molecules of greenhouse gases to demonstrate how industrial sources are increasing the “blanket” of these molecules around the Earth, trapping heat inside. I used these visuals to build a common vocabulary and a conceptual understanding of the human impact of global warming: We are upsetting a natural balance of the Earth by producing more and more greenhouse gases that keep heat from the sun inside our atmosphere, while cutting down plants that use up carbon dioxide. The result is that our planet is getting warmer, which is causing dangerous changes. I then had students illustrate their own diagrams of global warming as a way to assess their understanding. Most drew pictures of the Earth getting hotter and hotter due to ball-like molecules of carbon dioxide forming a barrier and balls of solar energy bouncing around inside. Once I knew my students had a common foundation, I presented the problem of global warming as both an environmental and social issue.

“Why is this a problem?” I asked. “Is this a problem just for animals?”

“No,” Dante piped in. “We’re polluting the air, and people can’t breathe. Sometimes in other countries people have to wear masks because the air is bad to breathe.” This really concerned students, and I could tell it made an impression on them.

“My mom said Hurricane Katrina happened because of global warming.” So far all of the class examples were about abstract, faraway places, so I was grateful to Janelle for bringing the issue close to home.

Instead of discussing scientific concepts we hadn’t studied, such as how warmer waters influence air masses and weather patterns, I decided to focus on the connection between the storm surge, rising sea levels, and coastal erosion. So the next day I started with a question: “When ice melts and melts in Antarctica, where does it go?” They were stumped. I tried again. “When an ice cube melts in your soda, what happens?” It gets

watery, they agreed. “So when glaciers melt into the ocean what happens to the ocean?”

“There’s more water!” Paris exclaimed.

I used this analogy to help students visualize global rising sea levels and coastal land loss. To illustrate one of the ways climate change is affecting our state, I showed a video from the U.S. Geological Survey showing coastal land loss in Louisiana in fast motion over 50 years. You can literally see peninsulas about two hours from New Orleans shrink to tiny islands. “The land we’re losing in Louisiana is our natural sponge to soak up huge waves from hurricanes before they get to where people live. Now,” I asked the class, “do you think all those global leaders who met in Paris had an important job to do?”

Adapting the Activity for Elementary School Students

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I knew right away that a mixer in which students walk around the room and introduce their characters to each other was too advanced for my class; I needed to create a structure in which I could guide them through the complicated ideas each character would present. Making this into a presentation with an audience could motivate students to take

more ownership over their role. So I modified the mixer into a performance modeled after an actual conference.

Next, I set about adapting the content. I rewrote each script from Bigelow’s original high school mixer, replacing big words and concepts with more accessible ones. There were a few parts that were just too complex, but I tried to preserve the big ideas as much as possible. For example, part of a Russian oil executive’s write-up (one of the characters who “benefits” from climate change) read, “Already our competitors in Norway — Statoil — are working on project Snow White, which will generate an estimated \$70 billion in liquefied natural gas over the next 30 years. I’m not going

to sit back and let the Norwegians or anyone else beat me out of this new business opportunity.” I changed this to “A company in Norway is expected to make \$70 billion from drilling in their part of the Arctic. It’s not fair for them to be the only ones to make money, I have a business to run!” I understood my students still weren’t going to internalize everything each character talked about, so I planned several ways to scaffold students through these concepts as we went through the preparation and performance. I also adapted the script so two students played one character together. The length was more suitable for 3rd graders and also provided each student a peer helper.

To introduce the activity to the class, we revisited the idea that there were many people around the world whose voices were not heard at the Paris summit. We watched *Democracy Now!* clips of groups protesting outside the summit, such as Indigenous women from Ecuador and youth leaders from some of the countries most affected by climate change. To really engage students in the importance of their role, I wanted to appeal to their sense of fairness. I used a clip of Kichwa activist Nina Gualinga from Ecuador to get my students thinking about the injustice of only a few making a decision for the whole world:

Indigenous people should be inside the actual negotiations, but we are not. Those who are actually negotiating right now, they might not have to live with the consequences of climate change, but I will. I will have to live with it. My sister, my little brother, and my children, they’re all going to have to live with the consequences of climate change.

The next day I told students we were going to have a people’s climate conference right here at our school and that each of them would be representing a real person’s voice. “Similar to the United Nations Climate Conference that happened in

Paris last month,” I read from the PowerPoint I had ready, “all your characters will meet at a conference and hear each different perspective. You will share your character’s experiences of climate change, and hear how other characters feel similarly or different.” I added, “There are also people who think climate change can mean good things for them. Some of you will be representing people in businesses who are making money from letting climate change continue. Is this wrong? You will have to decide what you think by listening to all the voices at the summit.”

I wanted to give my students some context for the people they would be representing and meeting at the conference, so I decided to organize each of the characters by continent. On a slide of each continent I highlighted the location of each country. I then paired the maps of country locations with pictures of people from that nation. (I tried to include non-stereotypical pictures of children.) After showing the pictures, I addressed issues of cultural representation in our performance.

“Your characters are based off of real people whose voices weren’t heard at the conference in Paris. One way we’re going to respect their voices is by not making up things about them we don’t know,” I instructed. “No one is going to use accents in their performances, OK? Because we don’t know what the real people sound like, it’s not respectful to guess.”

By the time we’d gone through the slideshow, viewing where each character was from, the students were hooked and couldn’t wait to get their parts. I passed out the role descriptions I had purposefully assigned to each pair considering students’ interests and strengths. Some scripts were even designed with a specific student in mind. For example, one might have simpler vocabulary for a student who was learning English as a second language, or a short passage for a student with autism to recite with prompts. I started to circulate, checking for conceptual understandings particular to each reading.

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I also encouraged students to think of props they might bring to help illustrate something about their character. I used “clues from the text” to steer most students toward props like a basket of apples for Oregon farmers.

The People’s Climate Conference

We spent three days preparing for the performances. Students were more engaged than I had anticipated. Joseph, for example, one of my most struggling readers, came back after the weekend and had memorized his whole script, proudly reciting the Bengali river names he practiced. “I am the mayor of Antarpara, a village in Bangladesh,” he proclaimed. “Antarpara is on the Brahmaputra River that flows from the Himalaya Mountains in India.” Matthew was bursting to share the research he had done at home about the Ecuadorian Amazon, “I saw pictures of just dirt and mud where there used to be rainforest and homes, and those trees made the air cleaner too.” Students worked with their partners to research and make the flag of their country, which, stapled to a straw, they stuck into Play-Doh on the music stand I fashioned as a podium for their presentations.

On performance day, our classroom was transformed into a conference room, with the chairs in rows facing the four-desk panel and podium. Performers were called up by their region, and sat at the desks facing the audience until it was their turn to speak. I projected the slideshow in the background, to help visually orient audience members to where we were in the world. As students performed, I wrote new keywords or significant phrases from their speeches on the whiteboard to help guide our debrief, and aid struggling students identify the big ideas on their guided notes handout.

When they were part of the audience, each student had a scavenger hunt handout on their clipboard that was also adapted from *A People’s Curriculum for the Earth*. This was to help students organize the overload of information from these presentations into a recognizable, game-like framework. Students were asked to identify someone who is affected by climate change in a different way from their character or someone whose life will change because of climate change. Following each performer, I gave students a few minutes to finish scribbling down ideas or reading over what I wrote on the board. Then I asked volunteers to share one of the “find someone who” questions they answered and used this as a jumping-off point for a dialogue about the effects of climate change.

Matthew and Jaelyn represented Moi Enomenga, a Huaorani leader from Eastern Ecuador: “We say, ‘leave the oil in the ground.’ Oil kills the Huaorani through pollution and kills everyone through global warming. Why do rich companies come

here? People from the richest and most crowded countries come here to take our resources.”

I wrote phrases on the board from their speech such as “spilled millions of gallons of oil,” “toxic rivers and streams,” and “oil burned to make energy.” Then I provided background information about oil extraction, describing the process of drilling and transporting oil across oceans to refineries. Paris made a connection to several oil spills in the Gulf of Mexico and a barge spill on the Mississippi in New Orleans. “The air smelled so bad,” she said. Students responded to Enomenga’s statements about rich countries exploiting poor countries. “They don’t even want the oil!” Matthew exclaimed. “But getting it ruins their homes and poisons their water, and then they don’t get any money. It’s not fair.”

We talked briefly after each performance, but I saved a lot of the conversations for the next few days. The purpose of the debrief was to unpack what students learned from the conference using their handouts and my notes on the board. It was an informal conversation in which I used students’ questions and comments to draw a global picture of the climate crisis and the responses to it.

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Elementary Students Take Action

One performance discussed at length during our debrief was about Tuvalu. Aaron and Janelle, playing the prime minister of Tuvalu, shared that there will be no more Tuvalu in 20 years. "How can anyone say that people in Tuvalu should suffer so that people on higher land can continue to fill our atmosphere with carbon dioxide by driving their big cars and buying stuff made halfway around the world?" Janelle implored. "This is sick."

These words really stuck out to the class, and they referred over and over again to the disappearance of this Pacific island because of the choices of rich countries to not curb fossil fuel consumption.

I used this as an opportunity to talk about the institutional versus individual changes that curbing climate change would require because I wanted to make sure my students left this unit with a bigger picture. I steered the solutions we discussed to focus on larger systems such as governments holding polluters accountable, and whole countries curbing emissions. "It's important that we make sure we turn off the lights when we don't need them, or that we use fewer plastic water bottles. But that's not enough to help Tuvalu," I told them. "Prime Minister Sopoaga knows that

it's companies that pull the oil out of the ground, or use energy in huge amounts that can make a big difference. Moi Enomenga knows that some of these American businesses go to other countries like Ecuador and damage his communities to get materials to sell, while they stay poor. But we can speak up and speak out like your characters, and tell these companies to change or tell the government to make them change."

The empathy that came from embodying characters whose voices were marginalized led to outrage and a sense of purpose. At this point, one of my students suggested that the biggest polluters — China and the United States — should be paying the people of Tuvalu when they have to move. I also shared videos of local environmental justice activists fighting oil refineries in mostly rural, poor, Black neighborhoods of Louisiana.

This unit illustrates my constant struggle with how to present and discuss complex issues with young kids, particularly because there is no easy solution for something like climate change. I wanted to discuss a relevant issue without reinforcing a feeling of helplessness. When dealing with such issues with elementary students, I tend

to focus on education as the way students can take action because this can take the form of many age-appropriate activities like writing, performing, and/or creating a school-wide campaign. I emphasized the agency of "ordinary people" by making the conference a people's climate summit and empowering them to feel that all of us can use our voices to make change.

We ended the unit analyzing the Paris Climate Conference agreement and writing letters to President Obama. We used modified versions of a *DOGO News* article and an *IndyKids* article written by a 10-year-old to break down how the agreement sets out commitments to prevent global temperatures from rising past the two degrees Celsius threshold. The whole class was adamant that climate change was a pressing issue that our

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government needed to address. However, the group was divided about whether this agreement should be adopted. Some students thought it was a good goal. Others thought that because there weren't penalties for breaking the rules, it didn't hold polluters accountable.

Jewel wrote, "Dear President Obama, I think you and the U.S. government should not adopt the U.N. Climate Conference agreement because I don't think it will help. I think this because I'm very concerned about global warming because 14 percent of the world's greenhouse gases come from the United States. . . . When people signed they could raise the limit. And nothing or nobody is making them live up to their goal."

Dante referenced the institutional equity issues we discussed: "(Kenya) is not even polluting that much, and they're experiencing the worst effects. A woman named Wangari Maathai works in the Green Belt Movement and this is what she said: 'Wealthy countries who are polluting more should raise money for the ultimate victims of the crisis: the poor people of the world.' I agree with that! And I know that you might say that you are donating money to poor countries. But that's poor countries, not poor people."

I reflected on the unit after it was over and decided there were parts that worked well and parts I would do differently on the next go-around. I would have liked my students to be able to do more research about the countries and cultures they were representing, and less of me presenting. Also, our post-conference discussions were so rich that I would have liked more time with them and less time presenting background scientific information.

Climate change will undoubtedly be a pressing issue throughout my students' lifetimes. Trump

has announced plans to withdraw from the Paris Agreement. Now, more than ever, I strongly believe that we can — and must — trust in young people's abilities to grapple with issues that impact them. My hope is that through exploring the scientific and social impacts of climate change early in their education, we can better prepare students to face the challenges of their world. ■

Resources

- Bass, Wakiria. 2015. "Climate Change Summit 2015." YouTube.
- CWPPRAclips. 2012. "Louisiana Coastal Land Loss Simulation 1932–2050." YouTube.
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Sharing the Planet

Central Idea: Communities can cooperate to solve global problems.

Part 1: Introduction

People are affected by climate change all over the world. This week, you will be given a role to perform based off of a real person's experiences.

Similar to the United Nations Climate Conference that happened in Paris in 2015, all your characters will meet at a conference and hear each other's different perspectives. You will share your characters' experiences of climate change, and hear about others' experiences.

Your Role

Everyone has to do their part to make something work. The same thing goes for performances, and the same thing goes for solving big problems! Study your character, and think about how you can perform as this person. To be respectful of other cultures, we will not make up accents or put on costumes that we don't know about.

Part 2: Conference Time

Write down what you learned from others at the conference. Think about these big discussion questions:

- Whom did you meet, or what situations did you learn about that surprised you?
- Did anyone make you angry? Who? Why?
- Whom did you meet or which situations gave you hope? Why?

At a global conference like the one put on by United Nations, people travel from all over the world to hear from one another and come up with solutions. When you are not performing, you must answer each of the "Scavenger Hunt" questions on the back. You must use a different character to answer each question, and it cannot be your own character!

FIND SOMEONE WHO . . .

Conference Scavenger Hunt

1. Find someone who is hurt by climate change.

_____ is hurt by climate change because

2. Find someone who thinks they can benefit from climate change.

_____ thinks they can benefit from climate change because

3. Find someone who is affected by climate change in a way similar to you.

_____ is affected in a similar way to me because

4. Find someone who is affected by climate change in a way different from you.

_____ is affected by climate change in a different way because

5. Find someone whose story has a connection between water and climate change.

_____ has a story about water and climate change because

6. Find someone who will have to make a life change because of climate change.

_____ will have to make a life change because

Wangari Maathai, Green Belt Movement, Kenya

Part 1: Africa is the continent that is being hit hardest by global warming. Surprise rains and floods, long droughts, not being able to grow food, and our land turning into deserts have already begun to change Africa. Poor people will be hurt the most. Already, some places in Africa are seeing temperatures rise twice as fast as the world averages. Wealthy countries will be affected too, but for my continent this is a matter of life and death. What makes this so frustrating is that the amount of greenhouse gases we release for energy is tiny compared to other countries in the world. Even though we're contributing a smaller part of the greenhouse gas problem, we are experiencing the worst effects.

Part 2: Here's what I think. Wealthy countries that pollute more should raise money for the victims of the climate crisis: the poor people of the world. For my part, I've been working in the Green Belt Movement for 30 years, since I was a young woman. We have gotten millions of people to plant trees, stop soil loss, save fresh rainwater, and practice more earth-friendly ways of farming. We must protect the trees from logging that is turning my country into a desert. Our goal is to plant one billion trees! We will do our part to save the planet, but it is the rich countries that are most responsible for the problem and the solution.

Roman Abramovich, Sibneft Oil Company, Russia

Part 1: Recently, a lot of people have been asking if global warming will be "good for Russia." This is a silly question. Like anything, it will be good for some people, and bad for others. But it will be good for me and my family. I'm going to make sure we benefit from this. I'm sure global warming is bad for a lot of people, but I'll leave that to governments and scientists. I'm a good businessman, so it's time to get to work!

Part 2: It's simple: As temperatures rise each year, ice will melt and huge new areas will be open for oil and gas drilling in the Arctic. As one of Russia's wealthiest men, and head of an oil and gas company, this is the chance of a lifetime! Scientists tell us that 25 percent of the Earth's unused fossil fuels are underneath the Arctic — that's 275 billion barrels of oil I can sell! A company in Norway is expected to make 70 billion dollars from drilling in their part of the Arctic. It's not fair for them to be the only ones to make money. I have a business to run!

**Enele Sopoaga, Prime Minister,
Tuvalu**

Part 1: Most people have never heard of my little island that is near Fiji in the South Pacific. Tuvalu has 10,000 people. My people live on fish and fruit; everyone knows their neighbors and people don't even lock their doors. Rising sea levels, caused by global warming, threaten my land and my people. Beginning 15 years ago, water began covering places on the island that had never been covered in the memory of the oldest grandparents. In August 2002, the entire island flooded with ocean water. This made our soil a lot more salty, and has forced families to grow their food in metal buckets instead of in the ground.

Part 2: Many people believe that if this continues, there will be no more Tuvalu in less than 20 years. The president of Australia said that if Tuvalu disappears, people should be moved. What incredible selfishness! How can anyone say that people in Tuvalu should suffer so that people in richer countries can continue to fill our atmosphere with carbon dioxide by driving their big cars and buying stuff made half-way around the world? This is sick. That's why I've been speaking out.

**Matthew Gilbert, Member of the
Gwich'in Tribe, Northern Alaska
and Canada**

Part 1: I am a member of the Gwich'in, the northernmost Native American nation on the American continent. There are only about 8,000 Gwich'in people left. Because of global warming, we are threatened as a people. We survive mostly from hunting caribou. Less snowfall is making sled and snowmobile transportation difficult, and that is usually how we get around. Rivers are freezing later, and the ice is too thin for us to carry heavy loads on it. At the same time, the lakes we fish in are drying up.

Part 2: The worst threat is to the caribou. In 10 years, their number dropped from 178,000 to 129,000. Calves drown when they try to cross rivers that are usually frozen. My grandfather remembers huge numbers of caribou moving in herds near their village during the spring and summer. No more. They have had to move to find their own food and safe places to live. Our environment is in chaos. The hunters of our tribe find it harder and harder to find the caribou that feed our people. We must reduce greenhouse gases. My people are dying.

**Chris Loken, Apple Grower,
New York**

Part 1: Everybody is saying awful things about global warming, and I know that it's bad for a lot of people. But recently, the news did a report of climate change winners and they came to talk to me! As they said in their report, "There are some upsides to global warming." Basically, I saw this coming. I knew that things were going to get warmer and you know what they say about a crisis, it's also an opportunity. Look on the positive side!

Part 2: I live in a beautiful place. Rolling hills. It's good for apple trees, too. But I decided to switch things up. Right next to the apples, I planted peach, apricot, and plum trees. Years ago, I saw this coming. These trees wouldn't have survived the winters of New York in the old pre-global warming days. But our winters are getting less cold. I'm betting my trees will do just fine. As I told the newspeople: "This farm here has been set up for the future." It's not easy running a farm these days, and if the weather decides to cooperate with me a little bit, I'm not going to argue with that! I'm sorry for all the folks that are hurt by this, but I've got to think of my family. I hope my kids will take over my farm when they're grown.

**Rinchen Wangchuk,
Snow Leopard Conservancy,
Ladakh, India**

Part 1: When I was a boy, after school ended for summer, I remember sliding down the glacier that stretched down the mountains near my village in the Nubra Valley — in Ladakh, in the far north part of India. Today, that glacier is almost gone. And I am watching the glaciers of the Karakorum Mountains disappear a little more every year. Some scientists found that each year, the glaciers have lost between 49 and 66 feet — that's taller than most of the buildings here! As the Earth gets warmer and warmer, the glaciers will begin to melt faster and faster.

Part 2: Glaciers are frozen rivers of ice that have built up for thousands of years. Because it rains only two inches a year in Ladakh, we depend on the glaciers for 90 percent of our water. Farmers depend on this water for their plants, and everyone depends on it for drinking. Ladakhis in the village have worked out a cooperative system to share the water that we have, but what will happen if the glaciers disappear? How will we survive? In the rural areas of Ladakh, we have almost no cars. We pollute very little and release almost none of the gases that are causing global warming. It is unfair that big, wasteful countries that produce so much carbon dioxide should be destroying the glaciers we depend on to live.

**Moi Enomenga, Huaorani leader,
Eastern Ecuador**

Part 1: For years, the oil companies have invaded my people's land — the rainforests of eastern Ecuador. The first company left thousands of pits from where they drilled for oil. The pits poisoned our rivers. Oil companies have spilled millions of gallons of oil and continue to dump toxic chemicals into our rivers and streams. And building all the factories has led to cutting down the rainforests too! When oil companies build roads through the rainforest to where they drill, others move in and chop down our forests and scare away the animals we hunt.

Part 2: With these oil companies comes destruction for us. And now we learn that not only is oil development destroying our rainforest, it's destroying the world too, it's being burned to create energy, and this puts carbon dioxide into the air that leads to global warming. We say, "Leave the oil in the ground." Oil kills the Huaorani through pollution and kills everyone through global warming. Why do rich companies come here? People from the richest and most crowded countries come here to take our resources. It might make their lives better, but it leaves us even poorer. But we are richer than they because we have the resources and the beautiful forest. We must all be concerned because this is the heart of the world here and we can't breathe. So we, as Huaorani, ask the city people, why do you want oil? We don't!

**James Hansen, National Aeronautics and Space Administration
(NASA) New York City**

Part 1: I am a scientist, but I'm also a grandfather. So that makes me especially interested in the future. Recently, I was arrested in Washington, D.C., protesting the building of the 1,700-mile pipeline to send oil from Canada to Texas. Why would a scientist and a grandfather choose to do something that would get me arrested as a form of protest? That's simple. If this pipeline is built and they continue to take this especially dirty and polluting oil from the Canadian Tar Sands, I don't think that we will be able to avoid the disastrous effects of a warming planet.

Part 2: Many years ago I was one of the first scientists to warn that as we burn more fossil fuels — coal, oil, and natural gas — the carbon dioxide created will heat the earth to dangerous levels, with terrible, terrible consequences. I thought people would do something about scientists' discoveries and see we needed to end our overuse of fossil fuels. Now I know we need more serious action. So I volunteered to be arrested with 1,200 other people to draw attention to the importance of stopping this deadly pipeline from being built. I am more than 70 years old, but if need be, I will keep getting arrested. I'm doing this for the planet and for my grandkids.

Richard H. Anderson, President of Delta Airlines, Atlanta

Part 1: I am the head of Delta Airlines, and live in Atlanta. I'm a businessman and a lawyer, and I've been in the airline business for more than 20 years. My job is to oversee Delta's long-term plans. I need to keep the company making money for our owners and to make sure our 80,000 employees have a place to work. I've been reading that air travel is bad for global warming. People say our airplane jets produce a huge amount of carbon dioxide and other greenhouse gases that increase global warming. An article I read said, "Flying is one of the most destructive things we can do." This researcher said, "The only principled option is to fly less."

Part 2: But being principled is complicated: Don't I have a responsibility to my employees and owners — and to the 160 million customers who fly Delta every year, on more than 15,000 flights each day? And that means flying to more places people want to go, making our prices as low as possible, and trying to get people to take vacations to faraway places like China and Japan to keep making the company money. Sure, we will try to pollute less, but we'll leave global warming to the governments and scientists to figure out. I'm a businessman.

Trisha Kehaulani Watson, Environmental Lawyer, Hawaii

Part 1: I was born and raised in the valley of Manoa, in this district of Kona (known today as Honolulu). I am a native Hawaiian. I am a lawyer specializing in environmental law — but much of my knowledge comes from talking with my family and kupuna, our elders. Over the years, I have seen the beaches I played on my entire life steadily erode. In many places, the sand is disappearing.

Part 2: My valley has always been very *waiwai* (rich with fresh water to drink and use), yet the waters have changed. We have far more unexpected weather. When I was a little girl, my grandfather used to take me down to the streams to watch the water rise when the season of heavy rains came. But things are much different today. The heavy rains are devastating. A few years ago we had a terrible flood wash through the valley. Since then, my street has been shut down numerous times due to dangerous flooding. The seasons have also changed. It gets much colder than it used to, and also much hotter. The plants have changed because of it. Fruits come at unusual times of year. Flowers bloom at different times of the year. Health problems also result from these weather changes. I can tell, the Earth is not well.

**Nancy Tanaka, Orchard Owner,
Hood River Valley, Oregon**

Part 1: Our family has owned and operated fruit farms (orchards) in Oregon's Hood River Valley since my husband Ken's grandparents bought land here in 1917, when they immigrated from Japan. Every generation of our family has farmed this land. And then we woke up to the front-page article in our newspaper. It was a shocker! In fact, it scared us half to death. A study by Oregon State University found that 75 percent of the water during the summer months in the upper part of the Hood River comes from melting glaciers on Mt. Hood. And because of global warming those glaciers are disappearing.

Part 2: That's our river. Well, we don't own it, but it's the river that irrigates our pears and cherries. Our family has grown fruit on this land since before we were born, and now they tell us that the water we use to feed our plants may be disappearing. To tell you the truth, I never knew so much of the river's water in the summer came from glaciers. You see, glaciers on Mt. Hood are kind of small compared to glaciers on other mountains closer to the Arctic. Scientists say the problem is that glaciers have been shrinking because of global warming. I always thought global warming might affect the Arctic and the polar bears, but not where I live in Oregon!

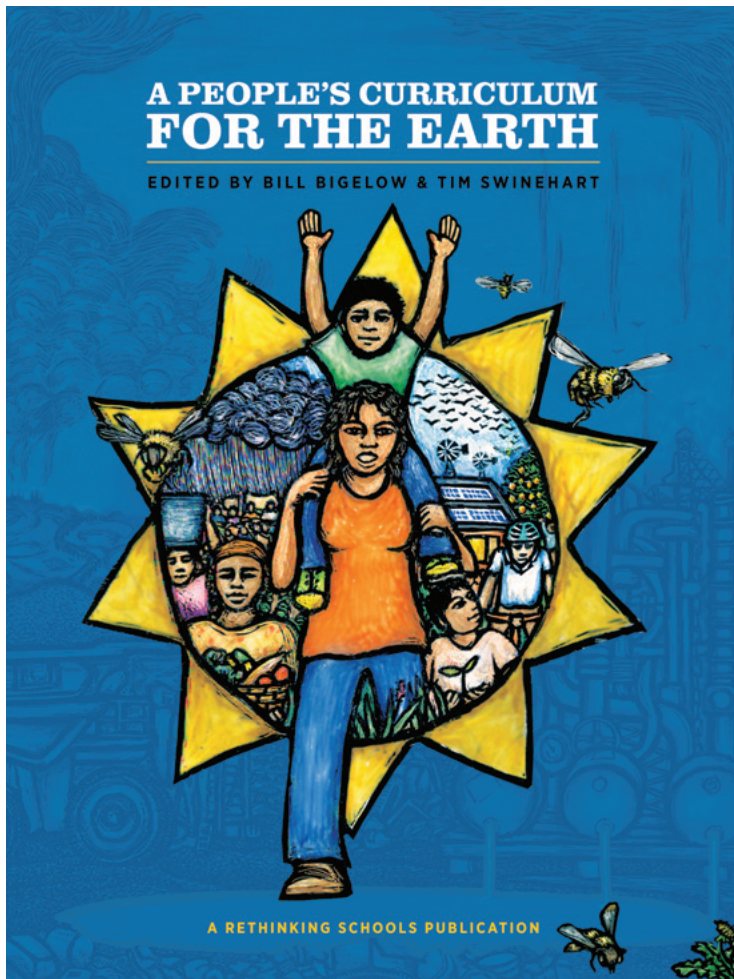
**Anisur Rahman, Mayor of
Antarpara, Bangladesh**

Part 1: I am the mayor of Antarpara, a village in Bangladesh. Antarpara is on the Brahmaputra River that flows from the Himalaya Mountains in India. We are in the lowlands close to the river and our village floods every year. We are used to that, and in fact, the flood is good because it leaves our land better for growing!

Part 2: But now the floods are much worse. Now the floods are huge and each year they destroy our homes and carry off the land. My village used to have 239 families. Now we are 38 families. But where can we go when our homes are gone? Our country has 150 million people — the most people for the space we have than any other place in the world. I have an 18-month-old child. By the time she is grown, this village won't be here. Where are we supposed to go?

This lesson comes from the Rethinking Schools book, *A People's Curriculum for the Earth: Teaching Climate Change and the Environmental Crisis*. The book includes more than 80 additional environmental justice lessons and student-friendly readings, for elementary through college. Go to www.rethinkingschools.org/earth to see the table of contents and to read the book's introduction.

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“To really confront the climate crisis, we need to think differently, build differently, and teach differently. *A People's Curriculum for the Earth* is an educator's toolkit for our times.”

NAOMI KLEIN

author of *The Shock Doctrine* and *This Changes Everything: Capitalism vs. the Climate*

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