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The Blue Plate

A Food Lover's Guide to Climate Chaos

Mark J. Easter

Foreword by Anthony Myint

TEACHER'S GUIDE BY CHRIS GILBERT



I. Introduction

In *The Blue Plate: A Food Lover's Guide to Climate Chaos*, author Mark Easter opens with the question, "Can we eat our way out of the climate crisis?" (p. 16). In the pages that follow, Easter connects the food on our plates to a broader discussion of agriculture's role in climate change, the importance of carbon sequestration, the benefits of locally sourced food, and the promise of regenerative agriculture. *The Blue Plate* offers students invaluable learning opportunities, prompting them to examine the intersections of agriculture and the climate crisis. As you walk your students through this book, this teacher's guide will serve as a helpful navigational companion. It features three sections: comprehension and discussion questions, thematic activities and research topics, and related resources. Importantly, this guide has an interdisciplinary focus and features a range of questions and activities useful for students in various educational settings, including high school and college classrooms. Activities and questions featured here can be easily modified and scaled, as they were constructed with flexibility in mind. Additionally, students are encouraged throughout to utilize technology and work together as they engage in a study of Easter's text. Hopefully, this guide will prove useful for you as you join your students in an exploration of this important book.

II. Comprehension and Discussion Questions

This section features a variety of questions for each of the book's chapters. Some questions serve as comprehension questions while others inspire reflection and analysis.

Foreword and Introduction

- 1.) "Is it still possible to face the gathering darkness and say to the physical Earth, and to all its creatures, including ourselves, fiercely and without embarrassment, I love you, and to embrace fearlessly the burning world?" (p. 6). How would you answer Barry Lopez's question? Share the thinking behind your answer.
- 2.) "My relationship to food systems has veered wildly, with many highs and lows, but ultimately the shift to regeneration has given my life hope and meaning" (p. 8). The book opens with this quote and a subsequent reflection by Anthony Myint. Follow Anthony's lead and reflect on your relationship with food systems. How would you describe it?
- 3.) In what way does regenerative agriculture offer something better than just "delaying the inevitable" (p. 10)?
- 4.) Are you surprised to learn that the organic movement is "still just 1 percent of the total acres farmed after fifty-plus years" (p. 11)? Why or why not?
- 5.) "I let the portions of my brain dominated by what my friend and colleague Dorn Cox calls farmphilia, or 'love of farms,' take over" (p. 18). What sort of emotions are associated with "farmphilia"? Have you ever experienced this emotional state?
- 6.) What is "agriculture's long shadow" (p. 21)? Consider a recently consumed food and think about how you acquired it, cooked it, and disposed of any leftovers. Did these actions create greenhouse gas emissions? If so, how?
- 7.) Explain how a "tractor dragging a plow through a field" (p. 24) releases more carbon into the atmosphere than its diesel engine. Does this surprise you? Why? Why not?
- 8.) What is a CAFO, and why is it so problematic from an environmental standpoint?
- 9.) Based on what you have learned in this section about industrialized and regenerative agriculture, explain why "regenerative agriculture and similar organic agricultural systems increase the nutrient density of the foods produced" (p. 31).
- 10.) What do greenhouse gas accountants do? Why is this work so important?
- 11.) What is the process of "drawdown" (p. 32), and what does it have to do with climate change?
- 12.) The introduction concludes with a discussion of three greenhouse gasses produced by agriculture. What information, if any, was new to you in this closing section of the introduction?

Chapter One: The Excited Skin of the Planet

- 1.) In what way did Neva's loss parallel "the story of her soil" (p. 39)?
- 2.) Easter mentions a range of foods made with grains (p. 42). Do any of these foods have a place in your life? If so, try to visualize the "logistical umbilical cord" (p. 42) connecting the land, grain, food factories, and the related food(s) you eat. Where does this cord start and end?
- 3.) What does Easter mean when he states, "bread's carbon footprint does not account for the centuries-long legacy of depleted soils and soil carbon loss" (p. 44)?
- 4.) Where does soil carbon come from? Relatedly, what is the "soil carbon vault" (p. 51)?
- 5.) According to Easter, how do natural systems "work as highly efficient production systems" (p. 51)? Identify an example of a regenerative system near you (you might not have to look far; you might start in your backyard or garden).
- 6.) "Don't plow!" I pointed to the bare fields rolling past the windshield. I rolled down my window and leaned into the breeze" (p. 63). Why do farmers plow soil? How does plowing contribute to soil decline? What are a few alternative agricultural practices a farmer could employ instead of plowing?
- 7.) What are some of the benefits introduced by using cover crops? More specifically, what makes this a regenerative agricultural practice?
- 8.) "Still, it was difficult for me and my peers to wrap our heads around the notion that the world's farmers, acting independently throughout history, could warm the climate through the seemingly benign act of simply growing food" (p. 67). How exactly did farmers warm the planet's climate?
- 9.) Explain how monoculture agriculture, bare fallow, chemical fertilizers, and climate change are interrelated.
- 10.) What is the soil carbon debt, and why is it important?
- 11.) Imagine you are asked to introduce regenerative agricultural practices to a group of farmers. Which practices mentioned in this chapter would you encourage them to adopt? How would you convince them of the related economic and environmental benefits?

Chapter Two: The Unnatural Green of Desert Vegetables

- 1.) Where is the author at the beginning of this chapter? What is the significance of this location?
- 2.) "The river joined a famously auspicious group—the Yellow, the Amu Darya, the Euphrates, the Tigris, and the Rio Grande" (p. 91). What does the Colorado River have in common with the other rivers mentioned here? What are the primary reasons for the Colorado River's present condition?
- 3.) In what ways do "dams and reservoirs, considered to be miracles of human engineering, disrupt ecosystems like no other" (p. 91)?

- 4.) “Water trickled from a gated pipe down thousands of narrow lines to laser-leveled beds of butterhead lettuce. A team of harvesters worked around and on a sanitized, stainless steel harvesting platform that crept slowly across a field of iceberg lettuce the size of bowling balls” (p. 93). In what ways does this passage—and the larger paragraph it was taken from—capture the mechanical nature of large-scale, industrialized agriculture?
- 5.) “The soil might be tilled more than a dozen times each year to prepare seed beds, kill weeds, and construct furrows for irrigation” (p. 94). Think back on the previous chapter and what you learned about the negative impacts of soil tilling. What are these impacts?
- 6.) Take a moment to reflect on how the leafy greens in your grocery store are connected to the “hyper-green, quilted patchwork” (p. 96) of vegetables described in this chapter. How do you think this new knowledge will affect your behavior as a consumer of this food?
- 7.) “In the late 1980s, scientists began asking the question: ‘Are dams and reservoirs helping to warm the planet?’” (p. 97). As Easter explains, the answer to this question is a resounding *yes*. Imagine that these scientists had next asked *how* dams and reservoirs warm the planet. How would you answer? You might reference the illustration on page 100 to help formulate your response.
- 8.) “It is because I am in love with all kinds of natural spaces—prairies, peaks and valleys, glaciers, the vast expanse of oceans, the chilly blue of lakes—that rivers especially draw me in. Research shows that many people in the world feel the same way” (p. 108). Are you one of these people? Why? Why not?
- 9.) In what ways are our lives “intertwined with the existence of dams” (p. 110)?
- 10.) Once more, connect the information in this chapter with the knowledge you gained from the previous chapter. What are the environmental benefits of “building organic matter in the soil and keeping the soil covered year-round” (p. 117)?
- 11.) What do you find most interesting and/or inspiring about Sunspot Urban Farm?
- 12.) “This refrain—lack of an agricultural labor pool, consumer expectations, lack of distribution systems—is repeated over and over again by growers and supply-chain managers interviewed throughout the country” (p. 125). Choose one of these challenges and consider how it might be addressed.

Chapter Three: The Salmon Forests

- 1.) This chapter opens with an exciting account of two grizzlies facing off. How did you feel as you read these initial riveting pages?
- 2.) “Pursuing wild fish in wild rivers with a fly rod consumes me like nothing else. I couldn’t wait to experience what it was like to catch a wild salmon....The gentle pull of the current around my legs, the scent of soil and water and fish, the scattering of light off leaves and the river surface lit up familiar receptors in my brain and took me to a happy place I feel whenever I am working a wild river” (p. 134). Fishing for wild salmon allows Easter to establish a powerful connection with nature. Do you have a similar hobby that connects you with the natural world?

- 3.) How had salmon “collectively built and sustained that forest with their bodies” (p. 136)? Additionally, in what way does the salmon’s life cycle illustrate the regenerative cycle, or “intricate feedback loop” (p. 136) present in nature?
- 4.) What are the “lungs of the planet” (p. 138)? Why is this an apt metaphor?
- 5.) How do mangrove and redwood forests differ? How are they alike?
- 6.) What are some of the disadvantages and advantages of fish farming? Relatedly, think about your fish-buying habits. Do you typically buy more wild-caught or farmed fish?
- 7.) “Man wants to see nature and evolution as separate from human activities. There is a natural world, and there is man. But man also belongs to the natural world” (p. 144). What thoughts do you have on Mark Kurlansky’s quote?
- 8.) Examine the Carbon Footprint of Seafood figure on pages 148-149. What strikes you? In what ways, if any, will this information inform the choices you make when consuming seafood?
- 9.) How is the aquaculture industry working to reduce pollution and disease problems caused by their practices?
- 10.) From your perspective, what are the most important lessons other fish farms should take from Clear Springs Foods? Explain your thinking.
- 11.) What is the feed-conversion ratio, and why is it so important?
- 12.) What broader lessons will you take from this chapter?



Workers maintain oyster baskets at an oyster farm. Hog Island Oyster Co., Tomales Bay, California. REMY ANTHES | HOG ISLAND OYSTER CO.

Chapter Four: The Corn Eaters

- 1.) What is your reaction to Easter's account of Tambora's eruption? What does the eruption have to do with the burning of fossil fuels?
- 2.) What led to the invention of manufactured, synthetic fertilizer in 1842? What did you find particularly interesting from this section of the chapter?
- 3.) Easter discusses scientists Dr. Joseph Henry Gilbert, Justus von Liebig, and John Bennet Lawes in the early section of this chapter. Choose one of these men and summarize his historical significance.
- 4.) Referring to synthetic fertilizers, Easter writes, "Used judiciously, they can accomplish miracles. Used carelessly, they kill" (p. 193). With this quote in mind, reflect on the risks and rewards of fertilizers. From your perspective, do the rewards outweigh the risks? Why? Why not?
- 5.) What are some of the troubling environmental problems associated with the overuse of chemical fertilizers? Additionally, what crop receives most of the world's fertilizer?
- 6.) What makes Dan DeSutter's organic farming system so noteworthy? Were you surprised to learn that his regenerative farming approach is environmentally sustainable *and* profitable? Why? Why not?
- 7.) What is Kernza? What benefits does it offer?
- 8.) Explain how no-till farming, the use of cover crops, and grazing livestock all improve soil health. Additionally, consider how you might convince a skeptical farmer to adopt one or more of these practices. How would you effectively persuade them? What benefits would you highlight?
- 9.) "Dan's farming innovations help him avoid more than a ton of CO₂e per acre of climate-heating emissions from manufacturing, transporting, and applying synthetic fertilizers and farm chemicals. That one innovation, spread across the roughly 2,000 acres that Dan and his family farms, was equivalent to removing 400 American cars from the road" (p. 224). Given the profound benefits associated with this agricultural approach, how do you think these practices could be taken to scale? What sort of policy changes would encourage widespread adoption of regenerative farming methods?
- 10.) Why has "soil health"...become the surrogate for 'soil carbon'" (p. 225)?

Chapter Five: Steve's Peaches

- 1.) "It never occurred to me at the time that future opportunities like that might someday vanish, and more importantly, the glorious fruit from the orchard around me, and the carbon the orchard held, might one day disappear" (p. 230). Can you identify with this recognition of nature's impermanence in the face of climate change? If so, in what ways?
- 2.) What is the Organic Farming Research Foundation? Check out [their website](#) to learn more.
- 3.) "Despite the delightful exchange throughout the day, a rumbling, worried thread resurfaced at intervals in the conversation—how would climate change affect operations like the Ela family's orchards?" (p. 233). Revisit this question after you finish the chapter. How would you answer it?

- 4.) "But I became exhausted just hearing about an orchardist's workload. My own little micro-orchard and garden pale in comparison to the life of somebody making an actual living from growing food for others" (p. 235). What did you find interesting about the life of an orchardist? Were you surprised by the amount of work this role requires?
- 5.) In what ways does the use of cover crops benefit the Elsas' orchards? Relatedly, which cover crop benefits have you seen mentioned in other chapters?
- 6.) What is the purpose of the wind machine mentioned in this chapter?
- 7.) What are some advantages and disadvantages of burning biomass to produce energy? Based on what you learned in this chapter, would you argue for the use of biomass to create energy? Why or why not?
- 8.) What are some ways wood chips can be utilized? Reflect on your location. Are you able to acquire wood chips for composting and/or mulching?
- 9.) In what ways can a hotter climate cause frost-damaged crops?
- 10.) "I suddenly felt like I was part of a company of sentries stationed on the walls of a great, imagined city. Vast and dangerous forces massed at the gate below, and yet nobody listened to our trumpet's warning call" (p. 253). Reflect on this beautifully written passage. What is Easter getting at? What are the "vast and dangerous forces" he refers to?

Chapter Six: The Cow in the Room

- 1.) "Raising meat—and especially meat from cattle, sheep, and goats—creates more emissions by a factor of between ten and fifty than any other food source except shrimp farmed in clear-cut mangrove forests" (p. 256). Why does raising meat produce more emissions than almost any other food source?
- 2.) Easter notes how the relationship between meat and climate change has become part of the "culture wars" (p. 256). Why do you think this has become a cultural issue? Additionally, how does the cultural discourse surrounding this issue affect our collective ability to address climate change?
- 3.) "And perhaps more than any other class of food in America, a dish made with meat is usually at the center of these experiences" (p. 257). If meat occupies a central place in your diet, how do you feel about the prospect of eating less of it, or even cutting it out of your diet entirely?
- 4.) What is enteric methane? How is it produced?
- 5.) From an environmental standpoint, what are some of the advantages and disadvantages of CAFOs?
- 6.) "Trying to prevent microbes in a cow's rumen from producing methane alters an evolutionary relationship that literally goes back to the dinosaurs. How would altering the microbes' base metabolism in potentially hundreds of millions of cattle, sheep, and goats play out around the world?" (p. 278). What are some risks associated with altering this long-standing evolutionary relationship? Do you think present environmental conditions have made this biological alteration necessary? Why or why not?
- 7.) Compare and contrast grass-fed beef and CAFO-fed beef. Which do you ultimately think is better for human and environmental health? Why?



- 8.) “An optimistic story has emerged that grazing livestock can lead to more carbon in the soil. In some cases that is true, but not necessarily everywhere, and the increase in soil carbon does not continue forever” (p. 280). According to Easter, what details make this story so nuanced?
- 9.) “Meeting current and future demand for animal protein means leveraging two core strategies” (p. 283). What are these strategies?
- 10.) “The main opportunity that appears to be left is choice. Just like driving less, or adjusting the thermostat, in order to reduce the emissions from eating animal protein, we are faced with individual decisions that collectively would reduce emissions” (p. 296). Which of the choices on page 297 do you feel you can make? From your perspective, in what ways could people be compelled—or even required—to make these choices?

Chapter Seven: Cecil's Hands

- 1.) In what ways has milk “impacted humans more directly than just about any other type of food” (p. 303)?
- 2.) “On your next trip to the grocery store, you might walk the dairy aisle and, if you eat dairy products, think about how they are a part of your day” (p. 304). If you consume dairy products, follow Easter's advice and reflect on the role dairy plays in your life. How often do you consume it? What personal rituals, if any, involve dairy?

- 3.) In what ways has our symbiotic relationship with cattle negatively impacted the climate?
- 4.) “Milk’s journey from sunlight, air, water, and minerals, through a dairy animal, to the dairy product on our kitchen table can be broken down into four different, roughly equal parts” (p. 307). What are these parts?
- 5.) How do manure lagoons function as “giant methane factories” (p. 313)?
- 6.) “So, is the best way to reduce dairy’s carbon footprint just to let the cows eat grass and drop it all out on the pasture? The answer appears to be yes, and also no” (p. 315). Why is the answer to Easter’s question so nuanced?
- 7.) In your opinion, what lessons should the agricultural industry take from Straus Family Creamery’s operation?
- 8.) One of the innovations Easter observes at Straus Family Creamery is the methane digester. To supplement Easter’s discussion of this technology, learn more about it [here](#). Why is this such an amazing innovation? From your perspective, is it possible to scale this technology? Why or why not?
- 9.) “So for me, the answer is yes, our choices matter, whether they are as individuals or as a society as a whole” (p. 325). Do you agree with Easter’s statement? Why or why not?
- 10.) After finishing chapters six and seven, reflect on our species’ relationship with cattle. Can we continue to consume beef and dairy products while carefully managing the associated climate impacts? Is there a place for beef and dairy production on a warming planet? Share your thoughts.

Chapter Eight: The Feast of the Legions

- 1.) What knowledge of composting, if any, do you bring to this chapter?
- 2.) ““This place looks and smells like a giant pile of lost opportunities!”” (p. 331). Aside from symbolizing lost opportunities, what environmental danger does this giant garbage pile present?
- 3.) “Compost may be the ultimate in recycling” (p. 334). How so? In what ways is composting an ideal example of the circular economy?
- 4.) At a microbial level, how does composting work? How would you explain this process to someone new to composting?
- 5.) Easter shares how he and his wife volunteer as “compost rangers” (p. 335). What does this role entail? Do you see an opportunity to follow their lead in your community?
- 6.) Conduct an online search for a commercial composting operation in your area. What services, if any, are nearby? If one is available, do you plan on utilizing it? Why or why not?
- 7.) “If the United States went grocery shopping, we would leave the store with five bags and drop two in the parking lot. And leave them there. Seems crazy, but we do it every day” (p. 339). What are your thoughts on this quote from “[Wasted: How America is Losing up to 40 Percent of Its Food from Farm to Fork to Landfill](#)”?

- 8.) “There are myriad reasons why composting has not become as widespread as recycling aluminum cans” (p. 344). What are some of these reasons? Reflect on what needs to happen for composting to become a widespread practice. How can the public become better educated about this process? What steps could political leadership take to compel more waste management companies to offer composting services?
- 9.) Reflect on the basics of composting. What can and cannot be composted? What are “green” and “brown” composting materials?
- 10.) “Impressive as these local reductions are, what impact would there be if many more farmers, ranchers, landfill managers, and consumers were engaged in the compost cycle?” (p. 362). Based on information from this chapter and any additional knowledge you have on composting, how would you answer this question?

Chapter Nine: The Blue Plate

- 1.) “Can we eat our way out of the climate crisis?” (p. 366). Now that you have made it to the final chapter of this book, how would you answer this question?
- 2.) What does the term “moon shot” mean? What moon shots does Easter describe in this chapter?
- 3.) “The product of an audacious crop-breeding program, Kernza is just one of several transformational foods emerging from an effort begun in 1976 by The Land Institute’s founder, Dr. Wes Jackson, along with his family and a group of supporters” (p. 369). What are your thoughts on Kernza? How would you describe its potential?
- 4.) “Agriculture itself may be humanity’s longest-running experiment. Have we taken a long enough view of history, informed anew by the climate crisis, to argue that agriculture has succeeded?” (p. 373). Given what you have learned from this book, how would you answer this question?
- 5.) “By working with nature, rather than against it, the growers in this book and others like them have bent the arc of history toward sustainability and regeneration. That gives me hope” (p. 373). In what ways have the growers in this book worked with nature? Reflect on the stories of these growers. Which ones particularly moved you? Why?
- 6.) “Yes, carbon farming will help. It is mandatory, a required step in the path to our low-carbon future. But—and this is a very big but—we cannot depend upon agriculture and the food system to completely erase today’s astronomically high fossil fuel emissions” (p. 375). Do you agree or disagree with Easter’s statement? Why?
- 7.) “We must stop burning fossil fuels completely, and as quickly as possible, and the responsibility to accomplish that goal must not just be placed upon the individual consumer” (p. 376). What sort of measures do you believe must be taken to challenge the fossil fuel industry?
- 8.) Review Easter’s suggested actions on pages 378–382 for eating our way out of the climate crisis. Which actions can you support and/or adopt?
- 9.) How do you feel after finishing the book? Do you feel hopeful, discouraged, or some combination of both? How might this book inform your behavior moving forward?
- 10.) What valuable lessons from this book can you share with others?

III. Thematic Activities and Research Topics

This section features a number of activities and research topics related to the book's central theme. For each research topic, students could:

- Write a research paper.
- Create a video essay.
- Design a website. Free resources for this include <https://www.weebly.com/>, <http://www.wix.com>, and <https://www.adobe.com/express/create/website-page>.
- Deliver a presentation. Free resources for this include <http://slides.google.com> and <http://www.prezi.com>.

Theme: The Climate Crisis, Greenhouse Gas Emissions, and the Importance of Regenerative Agricultural Practices

- **Learn from the Innovators Bending the Arc of History**

“By working with nature, rather than against it, the growers in this book and others like them have bent the arc of history toward sustainability and regeneration. That gives me hope” (p. 373).

Throughout the book, Easter highlights innovative individuals and groups who employ regenerative practices to combat climate change and promote environmental sustainability. The stories of these innovators provide us not only with hope, but also with potential pathways forward. Invite your students to use the text and online sources to learn more about these trailblazing individuals and groups.

To begin this activity, ask your students to form small groups and choose two of the innovative individuals or organizations listed below:

- [Sunspot Urban Farm](#)
- [Straus Family Creamery](#)
- [Dan DeSutter](#)
- [Ela Family Farms](#)
- [Al Organics](#)

Next, students should re-read the associated sections of the book while conducting online research to learn more about their chosen innovators. Note that your students can use the websites hyperlinked above or locate information on their own. As they (re)read and learn about these innovators, ask your students to write and discuss in response to the following questions:

- What makes your selected individuals and/or groups innovative?
- What traits or qualities do they share (e.g., passion for the environment, out-of-the-box thinking, willingness to take risks, etc.)?
- In what ways do they challenge the status quo?
- What practices and/or technologies should the agricultural industry adopt from these innovators? What policies should be enacted to take these regenerative practices to scale?

After all groups are finished, have students share and compare their findings with the rest of the class.

- **Assess Your Diet's Climate Impact**

“What formerly had been to me this pure, elemental thing, the product of evolutionary miracles, was suddenly tainted with the chemical stench of steel, diesel exhaust, and factory smokestacks. Not only that, but the individual whispers of microbes collect into a deafening roar of the powerful, climate-heating trace gases all of their tiny bodies emit. The sum total of it was enormous” (p. 22).

As the passage above makes clear, once Easter considered his diet's climate impact, his relationship with food was forever changed. Invite your students to experience their own climate-related food epiphany through this activity.

To begin, ask your students to reflect through writing on their daily and weekly diet. Which foods feature prominently in their diet? How are these foods typically acquired (e.g., grown, purchased at the grocery store, eaten in a restaurant, etc.)? Next, invite your students to access the quiz and calculator linked below:

- [Climate Change Food Calculator](#)
- [Find Your FoodPrint](#)

After completing both exercises, ask your students to reflect on the results. What is the climate impact of their diet? What is their FoodPrint? Given these results, what changes can they make to reduce their environmental impact? Have students reflect individually before sharing their findings and thoughts in small groups.

- **Visualize Greenhouse Gas Emissions**

“As I sat there, I recalled a documentary film describing humanity's role in the climate crisis. The film depicted greenhouse gas emissions in vivid colors. Bright-purple carbon dioxide streamed from automobile exhaust pipes and electricity plant smokestacks. Had I made the film, I might have added images of yellow methane pulsing from the mouths of cattle chewing their cud, and from lagoons of liquid dairy manure and rice paddies” (p. 104).

While it may not be the documentary mentioned above, [Climate TRACE](#) offers a useful way to visualize greenhouse gas emissions from sources around the globe. On the website, your students will view a global emissions map that uses different colored dots and pixels to represent greenhouse gas emissions sources.

After accessing the site, ask your students to choose several locations, nearby and far away, and explore the associated emissions data. What/who are the significant contributors? As students look across the data, what patterns or trends do they note? How do agricultural greenhouse gas emissions compare with gasses from other sources? Note that Climate TRACE also allows users to search for specific greenhouse gasses, so students can filter their search to show only methane contributors, for example. After they have explored the website, ask your students to share their reactions to the data. You might also ask them to connect their findings with related sections from *The Blue Plate*.

- **Illustrate Feedback Loops through Concept Mapping**

“In an intricate feedback loop, the salmon carried nutrients from the ocean up to the forest in their bodies, laid their eggs, and then died and were eaten by the animals upstream. They fertilized the forest soils in the defecations from the animals that ate them, and from the bodies of those animals when they died. The forests held the soil and constrained the rivers and lakes, filtering runoff, shading the water, maintaining the cold, clear, clean water salmon needed to breed and their young to survive” (pp. 136-138).

Throughout *The Blue Plate*, Easter takes the reader into various environments to highlight the feedback loops, or circular relationships, that characterize the natural world and regenerative agricultural practices. The passage above, for example, underscores the connectedness of streams, salmon, predators, and the forest. In this example alone, we can consider how root systems slow bank erosion; the resulting clear, flowing streams provide a thriving habitat for salmon; predators that feed on salmon deposit nutrients into the soil, thus benefiting the forests, and so forth. Invite your students to learn more about feedback loops in the book through this activity.

To begin, ask your students to revisit the text and search for a regenerative feedback loop that interests them. If they have trouble identifying one, you might provide a few examples, such as the food waste > compost > food production feedback loop or the dairy operation > captured methane > energy production feedback loop.

After re-reading the associated sections(s), ask your students to create a concept map to represent the feedback loop. The free resources below could be used for this purpose.

- Canva: <https://www.canva.com/graphs/concept-maps/>
- Lucidchart: <https://www.lucidchart.com/pages/examples/concept-map-maker>

To push your students' thinking, ask them to consider how additional regenerative practices might extend their selected feedback loop. In other words, ask them to consider how these circular relationships might be expanded to extend their positive environmental impact. Provide your students an opportunity to present their work to the class.

- **Start Composting**

"It makes no more sense to bury food waste in a landfill than it does to commit a car we no longer drive to the same fate....As it turns out, taking this simple step to divert the food into compost, rather than throwing it into the landfill, is one of the most straightforward climate-cooling actions a person can take" (p. 334).

Given its simplicity and numerous benefits, composting is essentially a no-brainer. Invite your students to start composting through this activity. To begin, emphasize that composting can occur at different scales. For example, students could compost at the individual level or organize a composting program for their floor or dorm; if they are particularly ambitious, they could develop a composting program for the entire campus. Ask them to consider what they are willing to take on, and then share the following resources to get them started:

- [9 Clever Ways You Can Initiate Composting Programs on Your Campus](#)
- [Everything You Need to Know to Start Composting](#)

Your students will undoubtedly ask what they should do with their compost. Encourage them to search online for local farms, communities, or organizations that could utilize their compost. Your students might also consider using their compost in a [Climate Victory Garden](#).

- **Raise Awareness through an Online Campaign**

"The choices we make and actions we take cannot be simply individual and personal if we are to succeed. They must propagate through society and government policy so that society, culture, and institutions are aligned to transform both agriculture and our energy and transportation systems to a sustainable future" (p. 378).

As Easter argues, individual behavioral changes are not enough; we must take actions to scale by transforming the broader systems and institutions that shape ideas and practices. Given this idea, ask your students to initiate an online campaign to raise awareness and encourage action.

- To begin, ask students to form small groups. Next, invite them to identify one of the issues from the text they would like to make others aware of (note that students might be even more motivated if there is a local example of something discussed in the text, such as a nearby manure lagoon, runoff from fertilizers into local waterways, large collections of food waste, etc.). They also need to select an audience to focus on. Will they target people their age? The general public? Policymakers? Their audience will dictate their communication style.
- The next step is to require students to research the issue and create media related to it. For example, students might record a video and/or take pictures of an affected location to document it. The primary goal is to educate a larger audience about the environmental damage and the problem's central contributor(s).
- Lastly, have students utilize social media to initiate an awareness and action campaign. They should disseminate their images, videos, texts, etc. by sharing them widely and using hashtags and other online tools to circulate content. This is also where they need to tailor their communication to address their intended audience (for example, the use of TikTok videos to reach a younger audience). Students should include an action item in the campaign using resources such as <https://resist.bot/> or https://www.change.org/start-a-petition?started_flow=true.
- For additional, useful tips on social media campaigns, direct students to https://edtechbooks.org/mediaandciviclearning/environmental_campaign and <https://www.yesmagazine.org/people-power/yes-social-media-can-be-used-for-positive-change-20180423>



A mound of windblown soil on Neva Heilman's farm captured by a windbreak of tumbleweeds against a fence. Eroded soil is piled several feet above the field on the downwind side of the fence. Yuma County, Colorado. MARK EASTER

Theme-Related Research Topics

- 1.) “Yes, carbon farming will help. It is mandatory, a required step in the path to our low-carbon future. But—and this is a very big but—we cannot depend upon agriculture and the food system to completely erase today’s astronomically high fossil fuel emissions” (p. 375). As Easter argues, regenerative agriculture is a mandatory yet insufficient solution to the climate crisis. Without confronting the fossil fuel industry and the political leaders enabling it, emissions will only continue to increase. Conduct research to learn more about the central players. Which fossil fuel companies are doing the most damage? In what ways do these companies use lobbying and other means to influence elected officials? What policies should be supported and/or developed to combat this influence and challenge the economic, cultural, and political power of the fossil fuel industry?
- 2.) ““The crop insurance program is really bugging me. I’m not sure how I can transition
- 3.) to organic and still keep my crops insured!” (p. 213). Conduct research to learn more about how the US Federal Crop Insurance Program hinders the broader transition to regenerative farming. What are the central issues? What policy changes are needed to address them? Who are the central players related to this issue?
- 4.) “A good example of this is the Atlantic salmon farming facility integrated into the circular economic system known as the ‘Halifax Model,’ which has the potential to address the environmental problems inherent in sea-based aquaculture” (p. 154). Conduct research to learn more about the Halifax Model. What is it? From where and whom did it emerge? What makes it economically and environmentally beneficial?
- 5.) Conduct research to learn more about regenerative agricultural systems beyond the United States. What is the history of regenerative agriculture in countries that have successfully scaled regenerative practices? What policies have enabled the growth of regenerative agriculture? What associated challenges have emerged? How are these challenges being addressed? You might also identify some specific lessons the US could take from your international example(s).
- 6.) Despite its profound environmental benefits, composting remains an underutilized practice in the United States. Why is this? What are the central cultural, political, and economic obstacles? What will it take to educate more citizens about composting? In what ways could waste management companies be incentivized—or required—to offer composting services? Conduct research to answer these questions.

IV. Related Resources

These resources relate to subjects from *The Blue Plate*:

- The official website of COMET-Farm
<https://comet-farm.com/>
- The official website of Project Drawdown
<https://drawdown.org/>
- The official website of Zero Foodprint
<https://www.zerofoodprint.org/>
- The official website of the Sustainable Agriculture Research and Education (SARE) program
<https://www.sare.org/>
- The official website of the Carbon Cycle Institute
<https://www.carboncycle.org/>
- Eco-Cycle's Carbon Farming Toolkit
<https://ecocycle.org/resources/carbon-farming-toolkit/>
- "Wasted: How America is Losing up to 40 Percent of Its Food from Farm to Fork to Landfill," a paper from the National Resources Defense Council
<https://www.nrdc.org/resources/wasted-how-america-losing-40-percent-its-food-farm-fork-landfill>
- "Grazed and Confused?" a report from the Food Climate Research Network
https://oms-www.files.svdcdn.com/production/downloads/reports/fcrn_gnc_report.pdf

ABOUT THE AUTHOR OF THIS GUIDE

Chris Gilbert, EdD, is a former high school English teacher and college instructor who works as an instructional designer. He is also an avid writer. His work has appeared in the *Washington Post's* education blog, *Answer Sheet*, the National Council of Teachers of English's *English Journal*, Kappa Delta Pi's *The Educational Forum*, *Critical Studies in Education*, and *Educational Action Research*. He has also written many educational guides for Penguin Random House and Patagonia. Learn more about his work [here](#).