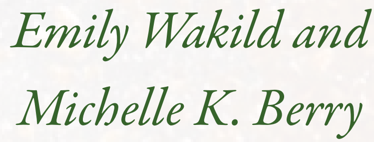

A PRIMER FOR TEACHING ENVIRONMENTAL HISTORY

Ten Design Principles

A Primer for Teaching Environmental History

DESIGN PRINCIPLES
FOR TEACHING HISTORY
A series edited by Antoinette Burton

A PRIMER FOR TEACHING ENVIRONMENTAL HISTORY

Ten Design Principles

Emily Wakild and Michelle K. Berry

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For our students: past, present, and future

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Preface

HOW TO MAKE USE OF THIS BOOK

BECAUSE WHO WE ARE shapes how we learn and the ways we teach, let us begin by introducing ourselves. This book has two authors. We came to teach and understand environmental history on twisting paths in a shared place, the University of Arizona's Department of History. Michelle specializes in the U.S. West and gender history, and Emily focuses on Latin American and world history, but we found ourselves constantly in dialogue over the framing and expression of environmental topics across historiographies. Our personal connections with environmental history reside much deeper. Michelle grew up on a farm in western Colorado, where she heard her parents, neighbors, and fellow farmers remembering times past and debating current political and environmental problems and possibilities. She loved to hike in the deep canyons of the Colorado Plateau and to raft on the white waters of the Colorado and Gunnison rivers, but at any moment it seemed that other people who also loved those activities could take away her brothers' access to traditional hunting grounds. Emily too was the product of the rural Intermountain West, mostly Santa Fe, New Mexico, and the Treasure Valley of Oregon and Idaho, but she was the progeny of bureaucrats rather than farmers. The Treasure Valley, a strangely cosmopolitan agricultural region with Mexican laborers, Japanese farm owners, and large Mormon families, imprinted on

Emily a curiosity about difference. We brought these and other experiences to our training as environmental historians.

After earning our doctorates our paths diverged. Michelle has spent the past nine years teaching in an independent high school in Tucson. Emily worked at an elite southern liberal arts college for five years before taking a position in a western metropolitan state university. These schools have varied curricula, class sizes, and student demographics, which present different opportunities and challenges that have expanded our teaching repertoire. Over a combined twenty-five years of teaching, we've taught U.S., Latin American, and global environmental history courses as well as highly specialized seminars. We have been creative about how to integrate environmental history into more standard courses, such as part of Advanced Placement U.S. History, or as a major component in an introductory undergraduate world history course. This breadth speaks to the opportunities that abound and the ways we've navigated different institutions on the journey of course design. We write this text in tandem and expect that you will hear both of our voices in solo and in harmony throughout.

Two traits brought us together in deep friendship and ultimately allowed us to collaborate on a book about something as personal and individual as teaching. First, we love to laugh, and we both amuse and humor one another routinely. Second, we love to think. When you get down to it, the best teachers do both of those things—often. This book, then, comes from a conviction that teaching, and reading about teaching, should be fun and should stimulate the educator to think. We hope you will find some humor peppered throughout that brings a chuckle or two, and we anticipate that you will find provocative opinions and ideas on pedagogy. What we have written is based on decades of thinking, reading, teaching, laughing, and learning from the choices we have made. At times we attempt to analyze the methods embedded in our examples or reveal the nuances of our opinions and biases; more often we leave that to you. We've endeavored to share successes; lest we seem too optimistic, keep in mind that writing about all our failed lessons would require another full volume. Do not feel compelled to read all of the chapters in order or in one

sitting. And don't be discouraged if there is no chapter dedicated to a topic you want to teach — climate change, for example; use the index to locate examples we give on this topic in chapters 3, 7, and 8. By the end of the book we hope you've found some kernels of wisdom and nuggets of inspiration. But most important, we hope you have found much to think about with those colleagues with whom you most love to think.

It may be useful to point out that most of our teaching experiences have been in smallish, face-to-face classrooms of ten to seventy-five students. Most of our classrooms have been relatively flexible discussion-and-lecture combinations with students ages sixteen to twenty-five. We have taught learners of all ages and backgrounds, including English-language learners and students with special needs. Clearly not all of our strategies will work in all places or with all students. Be aware of that as you read. We anticipate our examples based in this setting could be revised by those of you with the desire or expertise to work in other classrooms with other kinds of learners. Great teachers modify their pedagogy based on the needs of the students sitting in front of them, and we provide a range of examples to give you strategies to mold the teaching to your own setting. We do not discuss learning environments of the mega-classroom (those with five hundred and more students), nor have we tackled online teaching or hybrid courses, all of which may be the way of the future. Perhaps some of you have ideas for these kinds of teaching environments that you'd like to share. We would love to hear from you!

This text reflects our choices and competencies. There is no way to provide content ideas from all the places or times about which one could teach environmental history (especially globally). Our areas of expertise in the United States and Latin America are pretty obvious, and we wanted to write about what we know because we thought it important to give you authentic examples rather than ones we borrowed or imagined might work. In addition to showcasing our own knowledge, there are arguments for highlighting the United States and Latin America as geographic regions that merit environmental history approaches. Quite simply, most of the history — environmental and otherwise — taught in the United States is about the United States. The argument for Latin America is the inverse;

Latin America is consistently the region of the world that most befuddles world historians (which is why so many choose to ignore it). Undoubtedly experts on Asia or Africa will have alternative approaches. In sum, our examples could hardly make up a single coherent syllabus because they are not drawn from one course or intended to fit together in a proscribed way. We purposely do not elaborate on or provide syllabi because the point is not to replicate our courses but to think about how to design what will work for you based on your core convictions. We imagine that as you read a detailed example about a lesson on sense of place in the American West it will trigger ideas for a similar lesson using the content with which you are most familiar.

To deal with the mechanics of coauthorship, throughout the book we use varied pronouns—*I*, *you*, and *we*—to narrate our personal and collective journeys in the classroom. We have opted not to use our first names and lay possessive claim to particular stories, strategies, or chapters because in the process of writing, each chapter and most strategies have blended ideas from both of us. We found trying to police the boundaries between our experiences was as futile as cordoning off the United States from Latin America or the rest of the world. Better to let them blend into each other in unexpected ways. This may make the text blurry for some readers, but it allows us to stay true to our collective spirit of expression. If you are desperate to know which author teaches about bananas and which about llamas, email us and we'll tell you.

We approached this book as both a rough guide and a conversation starter. If, by the end, you take out your hatchet and begin to deconstruct our ideas in order to build your own version of environmental history, then we will have succeeded. If, after reading, you feel inspired to plant even one seed in one course about the importance of the environment in the study of the past, then our primary goal will have been achieved. If you do neither of those things, then we will have had a really good time writing a book that made us think, perhaps more than ever before, about our own teaching, and we will cherish that and all the laughter that journey brought to our friendship.

Acknowledgments

THIS BOOK DISTILLS decades of classroom experience into a uniform discussion. It is not the product of one or two voices but a cacophony of cumulative contributions from students, colleagues, mentors, and friends. The book could never have been written without Antoinette Burton's invitation to put our teaching practice into prose. She is a force for all that is good in the discipline of history, and her forward-looking role as both guide and inspiration provided us an outlet for a very different but deeply necessary kind of scholarly writing. We are very thankful to the other authors in the series, and several insightful graduate students from the University of Illinois, for critically and carefully reading the initial manuscript draft. The University of Illinois and Duke University Press generously sponsored the workshop around our initial draft, which made all the difference. Incredible external reviewers gave particularly insightful critiques about organization, content, and structure as well as ideas for evening out the tone. We gratefully acknowledge all their wisdom.

Emily: Teaching is always a collaborative endeavor. In this spirit I would like to acknowledge the importance of many conversations with other teachers and scholars similarly committed to excellent teaching, including Amanda Ashley, Bill Beezley, Lisa Blee, Lisa Brady, Chris Boyer, Mark Carey, José Augusto Drummond, Sterling Evans, Dee Dee Delongpre

Johnson, Jennifer Jopp, Lori Hausegger, Kevin Gosner, Claudia Leal, Nick Miller, Katherine Morrissey, Monique O'Connell, Germán Palacio, Nate Plageman, Bob Reinhardt, Myrna Santiago, Bill Smaldone, Miles Silman, Rebecca Som Castellano, Doug Weiner, David Wilkins, and especially the late B. J. Barickman. Nick Miller and Lisa Brady have been reliable, helpful, weekly voices of reason who improved the original proposal and many chapters. Darren Speece offered great suggestions on an early draft of the manuscript. I had the privilege of working as a teaching assistant in Michelle's environmental history classroom in 2004, an experience that expanded an already strong friendship and solidified our relationship as coteachers. I can't imagine writing a book like this with anyone else, and I continue to learn so much from her.

Several institutions have supported this project both directly and indirectly. The excellent faculty members in the departments of history at the University of Arizona, Wake Forest University, and Boise State University have provided me great latitude in designing courses and experimenting with teaching. The students in each of those experiments deserve credit as well; one can only hope that some of the intended lessons resonated. A National Endowment for the Humanities Fellowship for 2015–16 provided me ample time to write and organize the initial draft, and the Arts and Humanities Institute of Boise State University provided a lovely office with a view of the Boise River in Yanke Research Park. Familial support is an underappreciated but essential component of scholarly writing and effective teaching. Geoff and Debbie Middaugh and Chuck and Susie Wakild showed interest in and support of this project in many ways. Most of all, Eric Wakild is an inspiring teacher in his own right, especially of the two small humans we brought into the world while this project gestated. Ray and Charlotte have distracted me from writing more than anything, but it is my greatest hope that by teaching environmental history we might leave them a better earth.

Michelle: I would like, first, to acknowledge Emily Wakild, whose constant camaraderie in teaching and soul sister friendship has been a steadfast inspiration for going on fifteen years and without whom I would have never worked on this book.

I must also thank my students. Our intellectual journeys together are some of my most cherished memories. I appreciate those willing adventurers who understood just where I wanted to go and happily joined me, even if it seemed crazy. You were my north stars, and everything I did in the classroom and in the summer prep hours, I did for you. But I also appreciate the skeptics. You know who you are; you made me reflect and revise my practice to try to convince you to read more, write happily, and think willingly. Thank you all for making me a better teacher.

The Department of History at the University of Arizona has for many years been my muse for all things scholarly. Even as I traveled to the east side of town for nearly a decade of high school teaching, UofA was home. The years I spent in the classroom at St. Gregory College Preparatory School are what informed much of the experience I have shared here. To the administrators, such as Jonathan Martin, who encouraged academic autonomy and innovative, rigorous instructional practices, and to my many colleagues who shared my passion for teaching, I will be forever grateful.

In graduate school, teaching is not always the emphasis, and those who spend time on their craft are often encouraged to focus on their research instead, since that is what will ultimately land "a job." But my experience at the University of Arizona could not have been more different thanks to my mentors and colleagues, who loved teaching as much as I did and encouraged me in what I considered to be my vocation. Among those, and in no particular order, are Karen Anderson, Katherine Morrissey, Sally Deutsch, Reeve Huston, Kevin Gosner, Steve Johnstone, Alison Futrell, B. J. Barickman, Doug Weiner, Linda Darling, Luke Ryan, and Jodie Kreider. At St. Gregory I was honored to work with educators (including many coaches) who understood and privileged student-centeredness to such an extent that it forced me to be a better teacher. Among them were Paul Baranowski, Kate Oubre, Dan and Elizabeth Young, Vic Acuna, Ashley David, Shannon Smith, and Angela Earnhart. I was also fortunate to go to the best teaching undergraduate school in the country (The Colorado College), and I remain forever grateful to Anne Hyde and Doug Monroy for all they taught me.

Not long ago I read an article shared by Karen Anderson arguing that those whose work is their vocation tend to burn out sooner than those who consider work to be just work. I fear I might have fallen into that category were it not for my friends and family. My parents have always encouraged my scholarship and general nerdiness. Now my dad can stop asking, "How's the book?" My brother, Mike, my nephews, Mark and Matthew, and my incredible in-laws (Kay, Rich, Joe, Merc, Hayden, Gabby, Carlene) all humor my strange obsession with education and even encourage it. My furbabies remind me that all you *really* need in life is some exercise, good food, and a cuddle. My friends have kept me grounded during fifteen years in the classroom with good humor, good wine, and great conversation (often about teaching). I am especially grateful for Adam Geary, Megan Mulligan, Leslie Kim (and family), Emily Brott, Chris Martin, Christine Thornton, Brian Henry, Melissa and David Cornell, Emma Finkelstein, Alyssa Metcalf, Ariella Faitelson, and Matt and Steph Teller.

Most of all, I am grateful for Anne Stolcis, my partner for twenty-five years. She not only encouraged me throughout this project; she actually thinks teaching is cool and has allowed me to continually strive to perfect my passion. Life with her is beautiful.

Introduction

ENVIRONMENTAL HISTORY has arrived. It has moved out of the periphery and into the mainstream. Over the past forty years the number of history departments employing an environmental historian increased from under 4 percent to more than 40 percent.[1] Strenuous debates and scores of agonizing definitions have been written to explain what environmental history is and why it matters. Fewer, though, have made a case for how it can be taught. This book makes that case.

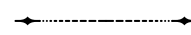
Students are hungry for humanistic approaches to scientifically driven problems. This is especially true because the humanities can be inviting, flexible, and experimental rather than made inaccessible by the obligatory mastery of quantitative theories.[2] One major advantage of environmental history is that it deals with a tangible past and present, which makes it a remarkable tool for understanding society.[3] Environmental history can appeal to a wide array of students precisely because it provides an expansive and creative approach that is grounded in the material world students observe changing before their eyes. Recognizing geological forces, climatological phenomena, and other organisms in our reconstructions of the human past will provide a more complete picture of how, when, and why humans have been able to tell their own stories and forge their own societies nestled within and shaped by environmental constraints and possibilities.

Humanists have spent decades contextualizing and explaining the varied human experiences across racial, ethnic, class, gender, generational, and educational divides. But we can do more. Neglecting environmental topics is no longer ethically reasonable. To leave the environment out of history is to imagine that humans live in a world different from this one. This might be an appropriate exercise for the future, but it hardly does justice to the past. Whether or not we are headed for an environmental or nonhuman "turn" that shifts substantive theoretical research on par with the "cultural turn" of the 1980s–1990s remains to be seen.[4] But a shift of attention and interest toward the relationships between humans and nonhumans captures rising concern from various directions. In order to get students to think about what it means—in the past, present, and future—to expand our understanding of humanity and to consider that humans are not alone, we must be deliberate in our choices and provocative in our planning.

Here you will find ample discussion of what course design means and why it matters; you won't find an overview of historiography. This is because we feel many historians talk much about the latter to the exclusion of the former. Consider one thing that is universal in any history department: historians love to talk about books. The most common response from a professor asked how to teach something is a list of what to read. Although it is a start, such bibliophilia can falsely substitute for a real conversation about the mechanics of teaching and learning. Most historians might willingly discuss books at happy hour, but teaching methods are more typical topics for faculty meetings and hierarchical evaluations. There are many reasons for this, but one of them is that few historians write about their own teaching experiences. We're even less likely to write about pedagogy as a process or shared endeavor. Yet methods, assessments, pacing, questioning, and organization govern how our favorite books reach students and what they learn to do with them. Because of this, we aim to convene a conversation about *how*—not merely what or why—teaching environmental history can be done. More than the books you assign or the content you cover, how you put readings and content together and what you have students do with them create a syllabus and guide a course.

With that in mind, this book has two interrelated goals. We aim, first, to provide strategies for designing a new course on environmental history and, second, to deliver ideas for infusing environmental history into existing courses. You are the only expert on your courses, your curriculum, and your constraints; only you can decide the appropriate approach. We can offer stimulus, inspiration, and a conversation about how and why to design purposefully. We suggest very few and very basic definitions and overviews of environmental history as a scholarly field. If you are looking to get up to speed with the latest research, we suggest you read the terrific journal *Environmental History* or peruse the many historiographic essays and debates found in other places.[5] In addition you will glean various texts and arguments from our discussions of teaching materials. No one resource or scholar epitomizes how environmental history must be done — the paths are plentiful.

The need for specific discussions of technique is made more acute by the abundance of tangential advice. As is true of so much in our modern world, ample materials are readily available — syllabi, textbooks, primary source readers, edited collections — but if you don't know what you are looking for or why you need it, it is hard to locate the appropriate scholarship. We attempt to sidestep these issues by sharing our experiences planning, teaching, and reflecting with colleagues. We explain specific models and assignments to reveal the convictions that shape our choices and expose the ways these have played out in our classrooms. We believe that a systematic approach to planning a course delivers purposeful instruction, which in turn allows students to harness the past as a perspective that goes beyond a single book or a solitary course. The remainder of this introduction provides some ways of approaching the sprawling field and makes a case for how historical methods are central to teaching it.



Environmental history is the history of human interactions with the rest of the natural world. This comes in many forms, scales, and styles. It has no geographical or temporal preference; it can be as particular as a gray squirrel or as expansive as a petroleum-fueled economy.[6] Ellen Stroud has

pointed out that environmental history's claim to significance is its expansive materiality. She argues that the environment is not equivalent to race or gender as a *category* of analysis but instead forms the world in which all categories of analysis exist.[7] As such, environmental history can be a metahistory for synthesizing all histories; most important, it suggests that our understandings of the past are incomplete without factoring in how nonhuman forces and actors have played a role in the human story.

Environmental history shares space with environmental studies and natural history, but it more carefully links our collective place in many kinds of nature with changes and continuities across social, political, cultural, and economic divides. The most common assumption about environmental history is that it tells the story of how people have tried to defend something called the environment with legislation, nature reserves, protests, or other tactics. This greatly oversimplifies the field with too much focus on the human side of things. But neither is the objective exclusively nature-focused. While natural history might describe the life and habits of salmon, environmental history would explain as well how salmon have been caught, eaten, and conceptualized by humans.[8] Environmentalist studies and natural history each contribute content to the practice of environmental history, but neither alone provides the full range of possibilities.

The current sophistication of environmental history comes from the fact it is both an old and a new field. The historical field, as a source of research, courses, and training, has been around for about forty years, but the idea of examining nature and culture as intertwined is much older. Two broad interpretations—progress and decline—characterized much early work. Researchers in many fields, especially geographers, anthropologists, and some historians, included the environment in history as part of a progressive interpretation of the human past that largely envisioned civilization as a steady process of learning to control and manage nature, first through agriculture, then cities, industries, and today's technologies. In this view the solution to environmental challenges would likely emerge from innovation and progress, as it supposedly had before. The contrarian view, declension, instead saw modernization as a fall from

grace. In a declensionist view, agriculture marked the departure from harmony leading to further pitfalls and exponential crises. Both approaches are fraught with simplistic and ahistorical problems: both assume we're all in the human project together, both overlook backward drift and catastrophes, and both ignore the fact there is no single harmonious point to reach or return to.[9] Rather than reconstruct them, knowing these approaches exist and have shaped decision making can provide a structural backbone for a course. Identifying progressive and declensionist narratives allows the emergence of more satisfying tales, such as those of change and adaptation.

If progress and decline at first limited the environmental stories that were told, several additional pitfalls have clouded environmental history's approach or deterred otherwise critical historians from examining nature's past. Many historians conflated the idea of paying attention to nonhuman nature as ceding explanatory power to geographic, climatic, or genetic forces. Such determinism had a formative—and understandably worrisome—role in linking eugenics with the environment. This is not the line of inquiry advocated by the field. Deterministic views posit that humanity is locked into fated ends, but environmental history reveals quite the opposite. A perennial challenge of environmental history is to examine the ways environmental forces are consequential but not all-powerful. Indeed rather than imagine that certain peoples are uniquely suited to particular climates, environmental histories unravel the specific ways geography, climate, and natural processes shape and are shaped by cultures.[10] More often than not, these dynamics shift our expectations rather than confirm our suppositions.

As much as avoiding determinism, environmental history avoids the assumption of universal values toward aspects of nature. For instance, before 1700 forests in Europe and the Americas were commonly viewed as better cleared to make room for farmland. By 1900 forests were better replanted, to recover other benefits. Over these two to three centuries, forests went from foes to friends, which affected other populations, such as sheep and shepherds that used meadows instead of forests. This is not to say that environmental history cannot guide value judgments but that

they should be transparent: neither sheep nor trees nor humans are unilaterally good or bad. Similarly the notion of a pristine or untouched nature, usually imagined to exist before Europeans arrived in the Americas, sets up a false dichotomy of good humans and bad humans, harmonious nature and disturbed nature. Neither nature nor humanity forms a stable unit, but when and why such harmony has been perceived are topics of historical interest.

The pitfalls might seem daunting, but the promises of environmental history loom even larger. By viewing nature and culture as intertwined in a long-term relationship, we can see the ways they both change dynamically, mutually, and unevenly. Such a relationship allows us to envision the intimate connections between external and internal nature — meaning humans are biological organisms but also cultural products. For example, Nancy Langston has shown that on the most basic level our private bodily fluids do not end with us but instead make it into waters we share with other creatures.[11] She historicizes how the hormones in women's urine have affected other species — producing pregnant male fish, small-penis alligators, spermless panthers, and hermaphrodite polar bears — and she asks how these bizarre problems with gender and reproductive health link humans and wildlife. What we eat, drink, and excrete connects us to our specific human culture and also to the biological systems of the planet. In such ways environmental history promises more complete stories because it draws upon other types of history, from the categories of race, class, gender, age, occupation, and experience of social history to cultural history's focus on material objects, sites of meaning, and concentrations of power and access.

Environmental historians reach promiscuously across wider disciplinary divides into ecology, literature, policy, and more. We must both deal with the ecological consequences of human activity and introduce ecology as an explanation for historical processes. Histories are often conveniently bifurcated along invented national boundaries that overlook the ways natural processes go beyond them. Transcending the nation-state provides an open invitation for global connections. *Global* cannot imply

comprehensive, but some processes—such as air pollution, biodiversity loss, and ocean fishing—come into focus only with larger lenses.

The complexity of environmental history is substantiated by an ever-increasing field of study. Undoubtedly, from its origins in the U.S. West to its global reach to and separate origins within Europe, Latin America, Africa, and Asia, the field harbors critical imbalances in gender, geography, and training that have repercussions if we want to inspire a new generation of students to engage with the field.[12] We attempt to mediate some of these concerns by using more recent work rather than classics in some cases and by providing suggestions rather than full-fledged examples of places we know less well. We reiterate our caveat that this book makes no claims to capture the entirety of the exciting global span of environmental history or to provide more than a sampling of possible lessons, examples, and models. In particular we welcome scholars of Asia, Africa, and Europe to offer up their own best practices and perhaps even a companion volume.

Rather than simply being something to know, environmental history, like all good history, makes the past come alive because it provides a focused approach for engagement. Other disciplines that study the environment—from biology and geography to literature and anthropology—do not necessarily understand historical methods, in part because we historians do not articulate and explain our methods enough or empower our students to do so. We feel the best way to get students interested in and practicing environmental history is to give them the tools to do it. This involves discussing the basic level of what we do, especially showing students how to find sources, how to take them apart, and how to put them back together again in a cohesive narrative (and consider what it means to do so). Locating, contextualizing, and corroborating evidence for analysis is the first step to historicizing a society or an event, and this process itself can be deeply revealing of the contours of historical research and study. Environmental historians might cast their search for sources broadly to include cultural as well as natural archives as they seek to understand landscape change or species evolution in tandem with exploration and colo-

nization, for instance. They could turn to dendrochronologists' charts of tree rings to understand drought or the color and shading of oil paintings to contextualize experiences of prolonged winter. Wherever they look, environmental historians aim to listen to people listening to nature.

Once sources are identified—which alone is a daunting task—historical methods get trickier. Identifying various perspectives captures the intricacy of the past and opens up avenues of inquiry that encourage students to empathize with the lives of people who are different from them. Sensitivity to the potential of understanding past lived experiences creates the space and flexibility for students to make connections across time, place, and discipline. Close textual analysis and deeply nuanced cultural and linguistic readings of sources (visual, textual, or data-centered) teach students how to read all over again. Exercises that practice these habits build the tools to deconstruct knowledge students already have and provide insights to see how various fragments might fit together in another way.

Students of history learn and practice how to situate and make relevant multiple perspectives. They are required to make sense out of a flood of stories—droplets of human experience that slip through quantitative models or set loose overly rigid comparisons. Historians see human motive in the texts they read and the stories they hear, and they seek veracity from innuendo and falsehood. In piecing together coherent explanations for what has already happened, students learn to build a narrative that embraces complexity while simultaneously searching for clarity and coherence. One student might see dramatic change over time while another picks out a strand of continuity. Telling the story as they see it and basing that story on reliable sources is both an iterative and an interrogative process. And the process relies on slow thinking, extensive questioning, and deep deliberation in order to make choices and balance opinions to form more complete stories. Asked what skills history teaches, many of us might suggest analytical thinking and clear writing. These are perhaps the most marketable end products, but getting to them involves many earlier steps that should be intentionally targeted in our courses.

The chapters that follow are organized into three sections. Part I, "Approaches," provides four strategies for navigating your way into environ-

mental history: a piece of fruit, a seed, a hatchet, and a llama. We begin with *the fruit* as an ordinary and familiar centerpiece for asking questions and building connections. By examining several ways histories of food can make environmental history relevant as an authentic part of daily life, fruit provides students a tangible conduit between their bodies and the natural world. The second, *the seed*, offers ideas for fostering complexity in content and narratives, ensuring that your course does more than point out environmental use and abuse by making students aware of progressive and declensionist perspectives. The chapter gives suggestions for clarifying language and setting up roundtable discussions. Taking timelines as the structural framework, *the hatchet* cuts into the traditional scaffolding of old and new courses to make room for environmental perspectives. Considering both periodization and place, it discusses questioning as a form of building context and climate change as a topic to break down existing narratives. The fourth example uses animals, starting with *the llama*, as entry points into a course on human relationships with nature. Exploring topics and techniques suited to this unconventional historical subject, the chapter seeks to examine ways of blending nature and culture by paying attention to other organisms.

Part II, "Pathways," may inspire you to consider old topics anew. The first pathway, *the fields*, leads into the wider world, meaning both places outside the classroom doors and various other fields, especially scientific disciplines. This literal and figurative field trip helps us to articulate ways of using science and science writing in history courses. Next, in *the land*, we consider how our senses of place awaken deep connections that shape people's choices at critical historical junctures. In the final example from this section, *the power*, we examine two of the richest threads of resource use in environmental history: energy and water. Either topic could provide an exciting stand-alone course, but we examine their intertwined nature and history as a productive pathway for students.

Part III, "Applications," steps outside specific examples to address three of the larger issues hovering over our classrooms: diversity, technology, and testing. Inequality is a theme in many of the examples of this book, but in chapter 8 we explicitly examine environmental justice, that is, ex-

amples of how and why certain groups, especially the poor, people of color, and women, have suffered disproportionately from environmental degradation. This topic has both methodological and thematic implications. Environmental justice allows us to explore, through individual lives, how environmental history is not just about nature but is also about power differences among human communities. Project-based learning emerges as a holistic way of getting students to grapple with inequality, and the examples and activities demonstrate our concern for applying content to students' current lives and civic choices. The ninth chapter, dedicated to *the tools*, considers various ways of planning for and teaching with technology as both a subject of environmental history and an application embedded in our courses. And in chapter 10, on *the test*, we discuss assessment as part of the design of a course. We suggest that abandoning the test and embracing creative assignments might just improve student learning.

Notes

Introduction

1 University departments as reported to the American Historical Association. Townsend, "The Rise and Decline of History Specializations over the Past 40 Years."

2 Casale, "The 'Environmental Turn.'"

3 Rothman, "Conceptualizing the Real."

4 Casale, "The 'Environmental Turn'"; Grusin, *The Nonhuman Turn*.

5 For a classic introduction to the field see "A Round Table: Environmental History." See also the roundtable convened nearly twenty-five years later, "State of the Field." Isenberg, *The Oxford Handbook of Environmental History*, provides a useful and recent overview with more global topics.

6 Benson, "The Urbanization of the Eastern Gray Squirrel in the United States"; Melosi et al., *Energy Capitals*; Santiago, *Ecology of Oil*.

7 Stroud, "Does Nature Always Matter?"

8 Two classic books for investigating salmon are White, *Organic Machine*, and McEvoy, *The Fisherman's Problem*. See also Wadewitz, "Are Fish Wildlife?"

9 Carolyn Merchant made this point well in *Ecological Revolutions*.

10 Recent examples include Liverman, "Conventions of Climate Change"; Dowsley et al., "Should We Turn the Tent?"; Wallis, "Past and Present, Culture in Progress."

11 Langston, "Gender Transformed."

12 A crucial indicator of the health and breadth of environmental history is the growth of scholarly societies in many regions. For example, the International Consortium of Environmental History Organizations (www.iceho.org) includes among its thirty members the American Society of Environmental History, the European Society of Environmental History, Latin American and Caribbean Environmental History Association (Sociedad Latinoamericana y Caribeña de

Historia Ambiental), Association for East Asian Environmental History, and the Australian and New Zealand Environmental History Network.

One. The Fruit

1 hooks, *Teaching to Transgress*.
2 Pollan, *The Botany of Desire*, xvii.
3 "Food Availability and Consumption."
4 Political ecology studies the relationships among political, economic, and social factors and the effects they have on the nonhuman environment. For an introduction, see Robbins, *Political Ecology*.
5 Merchant, "Gender and Environmental History," 1119. For other engaging texts on women and nature, see Merchant, *Death of Nature*, and Sherry Ortner's classic, "Is Female to Male as Nature Is to Culture?"
6 Soluri, *Banana Cultures*.
7 Norton, *Sacred Gifts, Profane Pleasures*.
8 Warman's book *La historia de un bastardo: Maíz y capitalismo* (1988) was translated and reissued as *Corn and Capitalism: How a Botanical Bastard Grew to Global Dominance*. Great syntheses relying heavily on it are in Mann, *1491*, and Pollan, *Omnivore's Dilemma*.
9 Mann, *1491*, 223.
10 Crosby, "The Demographic Effect of American Crops in Europe," 152.
11 McCann, *Maize and Grace*.
12 Crosby, "The Demographic Effect of American Crops in Europe," 161.
13 For an excellent text that adds a gendered analysis to the globalization of food and the unequal effects of transnational capitalism, see Deborah Barndt, *Women Working the NAFTA Food Chain*.

Two. The Seed

1 "General Land Office Records."
2 Cronon, *Changes in the Land*, vii.
3 Dean, *With Broadax and Firebrand*, 3, 5.
4 Guha, *Unquiet Woods*; Langston, *Forest Dreams, Forest Nightmares*; or Hecht and Cockburn, *Fate of the Forest*.
5 Wildlands and Woodlands, accessed April 28, 2017, http://www.wildlandsandwoodlands.org/; Harvard Forest, accessed April 28, 2017, http://harvardforest.fas.harvard.edu/other-tags/wildlands-woodlands.
6 Fairhead and Leach, *Misreading the African Landscape*. See also Davis, *Resurrecting the Granary of Rome*, on deforestation narratives in north Africa.