Integrating Human Culture, Community, and Sense of Place Into an Existing High School Environmental Studies Curriculum

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INTEGRATING HUMAN CULTURE, COMMUNITY, AND SENSE OF PLACE INTO AN EXISTING HIGH SCHOOL ENVIRONMENTAL STUDIES CURRICULUM

by

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A capstone submitted in partial fulfillment of the requirements for the degree of Master of Arts in Teaching

Hamline University

Saint Paul, Minnesota

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The stress of disconnected realities, the uncertainty of place and relation in an age of confusion, flow from my shoulders like sap from a wounded tree, the tension absorbed by the soft, forgiving ground. I feel settled. Not just a sense of relaxation, but an approaching tranquility. I experience the promise of well-being flowing from a feeling of connection with the varied life and nonlife around me. I feel an affinity with this vibrant landscape set against a backdrop of contemporary sameness and artificiality. And there is more. A web of relationships links me with this pocket of nature, some physical, some emotional, a few intellectual, even a flirtation with the spiritual. Intimate affiliation with living diversity offers me knowledge and kinship, and I am nourished by the association.

—Stephen R. Kellert, *The Value of Life: Biological Diversity and Human Society*
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CHAPTER ONE

Rationale

Research Question

How can I better incorporate the concepts of cultural diversity, community, and sense of place, into an existing high school, interdisciplinary, environmental studies curriculum?

Introduction: My Journey to Teaching

I smile every time I read my capstone research question. Who could have pictured me asking that question four years ago when I took my first education class at Hamline University? I don’t think a single one of my friends or work colleagues could have imagined it. I certainly could not have. And, if I turn the clock back even farther, the question becomes more and more preposterous. But, it is important to start at the beginning of this journey of mine, from law school honor student, lawyer and successful business professional, to my current position, with its proud title, “teacher,” because that journey is important to understanding who I have become, and why this is indeed, an important question for me to be asking.

God willing, this capstone will be published in 2015, thirty-four years after my enrollment in college, which marks the beginning of my journey to teaching, though I could never have anticipated the path that journey would take. I did intend to become a teacher when I started college. I had friends majoring in education who loved it, and I had always enjoyed teaching others how to do things from the time I was playing school with my younger sister at the age of 7 or 8. But college was a big deal and there was a lot to
figure out; I decided to remain undeclared for my first year. When I earned a 3.85 grade point average my first semester, my advisor became adamant that I not major in education. I recall him saying, “You’re too smart to settle,” or words to that effect. Now, I’m assuming that those reading this will have a strong interest in education, and probably be teachers themselves, so let me offer a defense on behalf of my college advisor.

I started elementary school in 1969. It was an exciting time in the United States. American society was in a state of flux; a series of rights were gained for the first time, including the rights of girls and women to be educated and employed on equal footing with boys and men. By 1981 when I started college, doors were really starting to open. Graduate school was a greater possibility than it had ever been before, with medical and law schools admitting almost an equal number of male and female candidates. It was no longer just a rallying cry or marketing slogan; women really could be whatever they wanted to be. My advisor wasn’t saying that teachers weren’t smart, or even that I was too smart to become a teacher. He was acknowledging the fact that in earlier times, intelligent women essentially had two career options: nursing and teaching. He was pointing out that I no longer needed to limit myself to those careers; that I could pursue any career that I wanted. Since my advisor happened to be in the political science department, he recommended law school. His argument was persuasive. I became a political science major and set my sights on a career in the law.

The next several years seemed to confirm my advisor’s recommendation. I took the Law School Admissions Test during my senior year in college and scored in the 95th
percentile. I was accepted into more prestigious law schools, but chose the less well-known Hamline University School of Law, where I was offered a full scholarship, and where my then future husband had also been accepted. Knowing that I would have to do well in order to be hired by a top-tier law firm, I pushed myself to the limit. I graduated second in my law school class, and was hired by the largest and most prestigious law firm in the Twin Cities, Dorsey & Whitney. It was a goal that had been achieved by only one other Hamline graduate at that time. It seemed that my advisor had been correct, and that law was the right career for me.

Unfortunately, while I might have been good at it, I was never passionate about it. After two years, I followed the lure of more money to another large law firm, this time in Pittsburgh, Pennsylvania. I loved living in Pittsburgh; I admired my colleagues and found the work more rewarding than I had in Minneapolis. But I still didn’t love what I was doing.

In a quest to find the right fit, my husband and I spent several years living in Europe and in Washington, D.C., he in the Air Force and I working for the government, before returning to Minnesota in 1994. I continued looking for the right job, working first as a constituent liaison to the late Senator Paul Wellstone, then trying my hand at law again, this time working in a small firm with a woman who would join the Minnesota Supreme Court a few years later. While both jobs were fulfilling in very different ways, neither was right for me. By 1996, I found myself working at West Publishing, now Thomson Reuters. I spent the next 15 years there, working in various aspects of legal publishing, from international database development to law firm management consulting and
education, moving upward through the ranks until I was managing a Thomson Reuters
business unit based in Washington, D.C.. I had a large office and a comfortable six-
figure salary. Still, something was missing. By the middle of 2010, I was facing a
corporate move back to the Twin Cities. It had been hard commuting back and forth
between Minnesota, where my husband was still living, and D.C., where I had spent the
bulk of my time for three years, but I was not looking forward to reintegrating into life at
corporate headquarters in Minnesota. The recession had taken a toll on the business.
Layoffs were rampant and morale was at an all time low. I wanted out.

As I pondered my next professional move, a question kept presenting itself: *What
about teaching?* When I thought about the jobs I’d had over the years, I kept coming
back to the training and mentoring aspects of those jobs. I loved my teams. I loved
finding what people were good at and helping them develop those skills to their full
potential, both for their benefit and for the benefit of the business. I finally understood
that I had been teaching all along.

I had toyed with the idea of teaching over the years, always considering something at
the collegiate or law school level. But, in thinking about it as a career now, I knew that I
didn’t want to teach college or law students. I was thinking about teaching high school
social studies. I thought back to my own desires in college, to my friends who had
pursued careers in education. They had been at it for almost thirty years by this time, and
were approaching retirement. Was it too late for me? After much reflection, I realized
that I’d be doing *something* for the next twenty years. It might as well be something
meaningful. I knew it would mean a significant drop in income, but that didn’t matter.
While money had been the driver of my career choices for more than twenty years, I finally understood that it really wasn’t that important to me. Perhaps it would be more honest to say that I had built up enough of a cushion that I didn’t need to place as much emphasis on it. In any case, I enrolled in the Master of Arts in Teaching program at my law school alma mater, Hamline University.

When I enrolled in the program, I honestly thought I would be able to get my teaching license relatively quickly. In fact, at first I was bitter about all the required coursework. After all, I was a smart and successful business professional. What did I have to learn in order to be able to teach high school? Along those same lines, I asked myself, “How hard can it be?” and so, decided I would continue to work full time, even after learning that it would take me three years, at best, to complete the program.

As every teacher reading this knows, and as now I do too, I couldn’t have been more wrong. While I immediately loved my classes and the wonderful professionals I was being exposed to, it was the hardest thing I had ever done. After a semester of working and traveling back and forth to Washington, D.C., on a weekly basis while squeezing in two night classes and homework, I quit my job and enrolled full time. Those first two education classes had sparked something I’d never experienced before. I was really excited about what I was going to be doing. And, I was no longer upset about having to take so many classes in order to get my teaching license. It didn’t take me long to understand that I knew nothing about teaching, and that the classes I was taking would be hugely beneficial to me.
When I was finally ready for student teaching, I had one of those lucky breaks that now seems to have been more than that. I was working with AVID (Advancement via Individual Determination), a nationwide program that aims to prepare children from under-represented populations for success in college, and got an email from a former AVID colleague, Bill. He said that he’d been talking about me to his brother, a high school principal in a large suburban school district. They both thought I’d be a good fit at his school, an environmentally focused high school for juniors and seniors. I had to read the email a few times. First, I had no idea Bill’s brother was a principal, and second, I wasn’t at all sure I would be a good fit at the school. I was a “social studies person.” Certainly I was concerned about the environment, but I wasn’t particularly strong in science, I preferred cities to the country, and I hadn’t been camping since the early 1980s. Still, I knew better than to turn down an opportunity. In the fall of 2013, I interviewed for and was offered a student teaching position at the school.

The Environmental Studies High School

I had observed the school, which for purposes of this capstone, I will refer to as the Environmental Studies High School (ESHS), with my Schools and Society class, my first education course in the fall of 2010. We visited because ESHS is unique in the metro area. The school, available as a choice for roughly four hundred 11th and 12th grade students in a large suburban district, opened in 1994 with the goal of creating a small learning community offering authentic learning experiences. The location and architecture of the school are important in achieving that goal. The school is located on a large, wooded campus. Trails lead directly from the building through the woods in many
directions, and connect with a large regional park directly across the street from the school. The building itself is curved around an adjacent pond, with a deck and covered outdoor classroom extending over the pond. The connection with nature continues inside the building, which is largely free of internal walls and fronted with floor to ceiling windows letting in both views and sunlight. The rear of the building faces a hillside covered in native plants. Again, windows bring the changing seasonal view of that landscape into the building as well.

Inside the building, the students at ESHS are assigned to one of four houses, with roughly one hundred students in each of two junior (Blue and Rose), and two senior (Green and Gold) houses. I was assigned to the Blue House for the first trimester of the school year, and couldn’t have been more excited to practice my skills in this amazing environment. After a productive, and exhausting trimester working with a talented team of teachers, and a spectacularly supportive mentor, I became a licensed high school social studies teacher in December of 2013.

My First Year of Teaching

I loved student teaching at ESHS. But it’s a very small school, with only four hundred students and perhaps twenty teachers. It’s the kind of place where teachers stay forever. In short, I had no hope of a landing a long-term teaching job there. Then came another one of those lucky breaks. A teacher unexpectedly took a position at a local middle school, creating an opening for a 12th grade social studies teacher in the Gold House. I applied for, and was offered the position. Almost exactly one year after beginning my student teaching, I became a full-fledged teacher at the school.
During the workshop week before classes started, I was repeatedly asked how I felt about my transition and the upcoming start of the school year. I found myself responding each time, “I’m super excited!” When I heard myself saying this for the ninth or tenth time, I was a bit embarrassed at the level of my enthusiasm. I stopped and said to the inquiring colleague, “I know that sounds silly. I don’t know why I keep using that phrase. I don’t think I’ve ever used it before this week.” She didn’t miss a beat when she responded, “Maybe you’ve never been super excited before.” And that’s when it struck me. No. Perhaps I hadn’t. It took awhile, but I had found my true calling. I was, and still am, super excited to be a teacher. I can say it now without any embarrassment at all.

Of course, that does not mean that teaching has come without challenges. The ESHS curriculum is centered on a daily, three-hour thematic studies course called “House,” which is taught by a team of three teachers, licensed in social studies, language arts, and environmental science respectively. While the idea of teachers working together across content areas to present meaningful units of study is compelling, what looks good from a distance is often much messier upon close inspection. It is also much more difficult than it might appear to a casual observer, or even to a student teacher standing in its midst. As a new teacher on an established team, I encountered unexpected challenges, and roadblocks as I worked to integrate the social studies into a well-defined environmental studies curriculum.

My greatest challenge in the first year was not with the students, or with my fellow teachers, but with myself. The other two teachers on my team had taught at the school for 13 and 20 years respectively, and they had taught the senior curriculum together for five
years. They had established a curriculum with which they were comfortable. And while I had access to materials from previous years, I was not able to make the social studies material seem deeply integrated into the curriculum.

My frustration began with the first unit of the trimester, a unit on biodiversity. The students were engaged with the project-based environmental science being taught, which was well integrated with the language arts curriculum through books like Tales of a Shaman’s Apprentice by Mark Plotkin, and Adams and Carwardine’s Last Chance to See. In contrast, the lessons on cultural diversity during that first trimester, both those I inherited from previous team members and those I developed on my own, felt disconnected from the other material. I felt that my lessons were seen as being separate from, or at best tangential to, the environmental issues.

Unfortunately, those lessons set the tone for the rest of the year. Consequently, I thought students’ end of the year responses to the capstone question, “How then shall I live?” were lacking in empathy, or authentic personal connections. I was disappointed with myself, and started wondering how I could do a better job strengthening the connection between the places we had studied and the humans who inhabit them, and creating more opportunities to explore the issue on a more local, and thus on a more personal scale, in the following school year.

I decided to take advantage of the fact that I had finished my Hamline MAT coursework, and would need to write a final capstone at the same time that I would be getting ready for my second year of teaching. I would channel this academic frustration into a research question: How can I better incorporate the concepts of cultural diversity,
community, and sense of place, into an existing high school, interdisciplinary, environmental studies curriculum? And perhaps more specifically, how can that be started early in the school year as part of a unit on biodiversity?

In researching my question, I expected to discover theories and sources that would allow me to make stronger connections between biodiversity and human cultural diversity, and thus be a better collaborator with my fellow teachers. I was excited to discover the emerging field of biocultural diversity, and thought it could allow me to revise our unit on biodiversity in a way that would facilitate a deeper understanding of the connection between people, their cultures, and local environments. As my research progressed, I decided also to pursue the idea of place-based education, which in some ways we had already incorporated into our studies, as a way to help my students understand people and their environments, their communities, in a more meaningful way.

Summary

In this introductory chapter, I have reviewed the journey that brought me to teaching and revealed some of the challenges I faced as a new teacher attempting to integrate ideas of human culture, community, and sense of place into an early unit on biodiversity. In Chapter Two, I will first explore the literature related to biodiversity in order to provide a foundation for the problem that I am facing. Next, I will examine literature in the emerging fields of biocultural diversity and place-based education. I believe these fields offer key insights into answering my research question.
CHAPTER TWO

Literature Review

Introduction

In order to address my research question: *How can I better incorporate the concepts of cultural diversity, community, and sense of place, into an existing high school, interdisciplinary, environmental studies curriculum?*, Chapter Two begins with an overview of foundational literature related to biological diversity (biodiversity) and biodiversity education. The chapter next examines literature in the emerging fields of biocultural diversity as a way of fostering a deeper understanding of the connection between human and biological diversity. Finally, the chapter looks at place-based education as a way to build on existing field experiences at ESHS, and further personalizing the connection between people and place for students.

Biodiversity

Beginning in the 1970s, biologists began sounding alarms about the increasing extinction of many animal and plant species, and their habitats (Navarro-Perez & Tidball, 2012). According to Harmon (2002), the term biodiversity was first used in 1985 by Arthur G. Rosen at the “National Forum on BioDiversity” (p. 23). In his published report of the conference, renowned biologist E.O. Wilson attributed the increasingly rapid demise of insect, animal, and plant species to human degradation of the environment and loss of natural habitat leading to species extinction (Wilson, 1988). Wilson argued that
the human threat to biological diversity was a “matter of unprecedented urgency” because biodiversity provided benefits to both humans, in the form of medicinal and food diversity, and to the planet’s overall environmental health and sustainability (p. 3).

Harmon (2002) described how the 1985 conference, and the environmental movement spawned by it, marshaled what had been a general interest in the variety of Earth’s plants and animals into a moral response to a “biological extinction crisis” (p. 24). Maffi (2001) noted that while the number of species on earth had not been determined, experts then estimated that twenty or more percent of those species would become extinct over the next thirty years. The trend has continued, and according to Harmon (2002), a majority of biologists agree that “the current rate [of plant and animal extinction] is far above previous levels—perhaps 1,000 times higher—and the cause is human activity” (p. 32, citing Pimm & Brooks 2000, p. 59). And so, the term “biodiversity” as a combination of the terms biological and diversity, literally means the total variability among genes, plants, animals, and ecosystems found in nature (UNESCO, 2008). But, the term has gained a much stronger moral connotation, implying that such diversity is inherently valuable, that it is endangered due to human activity, and that it should be preserved (Harmon, 2002).

In 1992, the first United Nations Conference on Environmental Development met in Rio de Janeiro, Brazil. This landmark conference marked the passage of two important agreements, the Convention on Climate Change and the Convention on Biological Diversity. The latter, signed by 150 governments, included a requirement that by 2010, the parties achieve a “significant reduction of the current rate of biodiversity loss at the
global, regional and national level” (CBD, 2006). The Convention on Biological Diversity (CBD) included education and awareness strategies as critical components for achievement of those goals (Navarro-Perez & Tidball, 2012).

Unfortunately, in his speech launching 2010 as the International Year of Biodiversity, Ahmed Djoghlaf, the Executive Secretary of the CBD, acknowledged that the target set in 1992 had not been met. Rather, he confirmed that biodiversity loss was continuing at an unprecedented rate. Pointing to surveys conducted in several member countries, and relying specifically on a global survey sponsored by Airbus on behalf of the CBD, Navarro-Perez and Tidball (2012) maintained that the target was missed because the educational efforts of the member states had failed either to capture the immediacy of the threat, or to convey the message that changes in human attitudes and behaviors could positively affect the problem.

In attempting to provide a solution to this disconnect, Navarro-Perez and Tidball (2012), pointed to a 1999 multiple-year study in the Netherlands that involved policy-makers and NGOs, curriculum designers, teachers, and students. They developed a six-point framework for making biodiversity personally meaningful to students. The intentionally broad framework reads as follows:

1. Determine pedagogical perspectives and, based on them, set learning goals (e.g., an ecological literacy perspective focused on ecological concepts, relationships and interdependencies).

2. Select specific themes and contexts that are complementary to overall learning goals in a certain educational settings.
3. Analyze meanings of biodiversity in different contexts using a simple working definition, for example “biodiversity represents variability in biological entities in a specific space at a specific moment in time.”

4. Set concrete learning objectives that are compatible with the general learning goals and the specific themes that were selected.

5. Valuing biodiversity through the examination of different interests and values given by different groups of people, while contrasting these to our own.

6. Contextualizing the concept of biodiversity through the learning contexts and objectives chosen to understand biodiversity, which were determined in the previous steps.

They concluded: “In general [it] suggests guidelines for biodiversity education converge in the need for building critical skills and environmental literacy that could eventually lead people into action towards biodiversity protection” (Navarro-Perez & Tidball, 2012, p. 21).

The Emerging Field of Biocultural Diversity

According to Maffì and Woodley (2010), frameworks like the one above do not go far enough because they continue to focus solely on the biological aspects of diversity, even while urging humans to take greater interest and action in preserving it. Maffì and Woodley have proposed that this disconnect between understanding threats to the environment and recognizing the human role in them arises in large part because scientists and academicians have historically considered the natural and the social sciences to be entirely separate disciplines, with humans not only being considered
separate from nature, but dominant over it (Maffi & Woodley, 2010). Thus, students have been taught about evolution, the development, and more recently the decline, of nature and ecosystems, in isolation from the evolution, development, rise and/or decline of human cultures. Loh and Harmon (2014) have stressed that even today, most people, including educators and scientists, consider nature and culture separately, and teach them as separate disciplines.

In promoting the idea that these disciplines must instead be taught together, Loh and Harmon asked:

Is there anywhere left in the world that is entirely natural, untouched by human intervention? The deep sea bed perhaps . . . but most landscapes are, to a greater or lesser extent, the product of human culture too . . . So would it make more sense to think of all the myriad manifestations of nature and culture as expressions of a single concept, a nature-culture nexus? (p. 2)

Maffi and Woodley (2010) refer to this “nature-culture nexus” as biocultural diversity.

The term biocultural diversity appears to have first been used at a small working conference held in Berkeley, California in October of 1996. Hosted by a newly formed organization called Terralingua, the title of the conference was “Endangered Languages, Endangered Knowledge, Endangered Environments” (Maffi & Woodley, p. xix). For the first time, experts gathered across multiple disciplines, from biologists and natural scientists, to anthropologists, linguists, geographers, and other social scientists to study the idea that threats to the world’s biological, cultural and linguistic diversity might be connected.
At the conference, they began to create a framework, and indeed a new discipline, for studying that correlation (Maffi, 2002). “Since then . . . there has been a growing movement toward thinking of the diversity of life on Earth as biocultural diversity—diversity that, at least ever since there have been humans on the planet, has been jointly shaped by both natural and cultural forces” (Maffi, 2002, p. 21). In short, biocultural diversity considers humans and biological species to be inextricably connected. So, the web of life that is so frequently studied in units on biodiversity, does not consist solely of the variety of plant and animal species and ecosystems, but also includes the tremendous variety of human cultures and languages that exist on earth. To those promoting the study of biocultural diversity, “humans are part of, not separate from the natural environment; and biodiversity, cultural diversity, and linguistic diversity are interrelated and interdependent manifestations of the diversity of life” (Terralingua BCDEI, 2014, p. 4).

Supporting this perspective, Harmon (2001) pointed out that even though there might not yet be specific proof of direct continuity between biological and cultural diversity, the similarities between the forces driving biological extinction through destruction of habitat, and the homogenization of cultures as evidenced by extinction of indigenous languages was inescapable. He argued that continuing to treat the questions of biocultural diversity (nature) and human diversity (indigenous cultures including languages) separately was to risk running out of time entirely. Maffi (2002) agreed that only through the bridging of these disciplines, with an integrated, language-centered biocultural education, could people, and perhaps most specifically young people, be made to
understand their role in the natural process, and the risk they face by continuing to ignore it.

While researchers like Maffi, Loh, and Harmon have generally looked to the dying languages of remote indigenous groups for their studies, others have approached the nature-culture nexus from different, often more local perspectives, including using agriculture, regional food, and culinary traditions to illustrate the strong link between cultural identity and environmental biodiversity (Pilgrim & Pretty, 2010). In what I will call “agro-biocultural diversity” Nabhan (2008) looked at the connection between local agriculture and cultural diversity both as a celebration of local foods, and as a reflection on the once overflowing cornucopia of local foods that have been lost, seemingly forever, to globalization and the quest for fast, easy, and more exotic foods (Nabhan 2008). In doing so, he has advocated for a more sustainable future where people, and indigenous cultures, are once again connected with varied local food sources.

In a 2006 study, Nabhan and Kindscher applied this food-based biocultural lens to the Great Plains and prairies of the North American heartland, an area encompassing central and western Minnesota, and ranging from central Texas through the Dakotas and into eastern Montana. In arguing for the return of wild bison to the area, the authors list a myriad of native plants and foods that could return to the area, while revealing their former importance to the diet and cultural practices of the region’s indigenous tribes. They present an intriguing agro-biocultural premise, that restoration of a keystone species could improve the health of current residents, and reignite indigenous cultural values and perspectives long thought lost (Nabhan and Kindscher 2006).
**Place-Based Education**

Another, more practical problem with these approaches, regardless of the label used, is that they tend to focus almost exclusively on indigenous, often remote populations. How will students attending high school in a modern American suburb make sense of such people and their environments? This disconnect is, of course, at the very heart of the problem. In describing the converging biocultural extinction crisis, Maffi argues that its causes reside primarily in the “impact of global economic, political, and social processes that lead to unsustainable use of nature and culture” (Terralingua, 2014, p. 5).

Recognizing the same educational disconnect noted by Menzel and Bogeholz (2009), Maffi goes farther, assigning much of the blame for this disconnect to the increasing number of people living in cities and urban environments, where they are largely cut off from nature, and certainly from any sense of connection to or dependence upon it for their survival (Maffi & Woodley 2010). Combined with their increasing dependence on a globalized economy, this lack of connection to nature creates a feedback loop where the convenient “turning of a blind eye” to the harmful consequences of globalization results in increasingly negative environmental impacts, harmful consequences for nature, and ultimately human societies and culture as well.

Interestingly, ESHS has a mission of engaging students and the environment, and much of our learning experiences take place outside the classroom. But, many of the experiences are somewhat contrived—having been constructed years ago and recurring year after year. And, even these field studies are primarily biological studies of the local environment. So, the question remains: how will students be motivated to care? Kellert
(1996) maintains that environmental literacy on the subject of diversity, or indeed on any environmental topic, cannot be achieved without engaging people intellectually \textit{and} emotionally. In short, there needs to be a value connection. Students need to understand, or come to their own understanding, that our existence, their existence, is improved through connections to nature. And, perhaps more importantly, that our lives are diminished when we remove those connections. It seems unlikely that studying remote locations using language, or any other lens, is likely to forge that connection for an American suburban teenager. The answer may lie in place-based education.

In one of the first references to the term in academic literature, Smith (2002), defined place-based education simply as an aim to ground learning in local phenomena and students’ lived experience. Smith called for a return to learning within the context of specific locales that pre-dated schools, bemoaning the idea that students, especially after elementary school were removed from the direct learning of their early childhood, and forced instead “despite all the well-intentioned attempts to engage them as participants in the construction of meaning (to) internalize and master knowledge created by others” (586). As noted by Gruenwald and Smith (2008), it is difficult to come up with a simple definition of place-based education because it is as much a theory of education as a method of teaching. It has been described by many names: community-based learning, environment as an integrating concept (EIC), environment-based education, and bioregional education, among others (p.6).

But, in surveying successful place-based educational efforts in his early article, Smith identified five characteristics, or themes, typically included, that remain critical to any
definition or place-based program: cultural studies, nature studies, real-world problem solving, internships and entrepreneurial opportunities (hands-on service learning), and induction into community decision-making processes (i.e., civic engagement). Sobel (2005) goes farther in describing how place-based education differs from the more general term, environmental education. Noting that environmental education has traditionally focused on field studies, nutrient cycles and biological species (as has been the case at ESHS), he sees place-based education as being much more inclusive:

Desirable environmental education, or what we’re calling place-based education, teaches about both the natural and built environments. The history, folk culture, social problems, economics, and aesthetics of the community and its environment are all on the agenda. In fact, one of the core objectives is to look at how landscape, community infrastructure, watersheds, and cultural traditions all interact and shape each other. (p.9)

Thus, place-based education is not simply a matter of getting out into the local environment in order to study nature, even if that is in-depth and on a continuing basis, but rather, it includes a significant cultural and social component. That is not to say that place-based education must take place entirely outside the classroom, or focus only on the local community. To the contrary, the local community becomes a laboratory, a lens through which students can develop a connection to the broader concerns of the world—and therefore attempt to live in a way that will make it a better place. As Gruenwald and Smith (2008) argued, “either all places are holy, or none of them are” (citing Jackson, 1994).
The idea is to develop that sense of caring urged by Kellert through connection to specific places; to the people and community of places, both near and far. Knapp (2008) discussed both this connection and how the model supports his educational philosophy, “[c]ontextual learning becomes the vehicle for creating meaningful curriculum and instruction. I constantly ask myself, ‘Where is the best laboratory for learning and what experiences will help my students find the knowledge they want and need?’ (p.9). The goal then is not only to get out of the classroom, or even to get into the local community, but also to construct the best learning environment in which students can make real-world connections between what is local, and issues of a larger global concern.

Summary

In Chapter Two, I considered specific areas of study that could provide an answer to my research question: How can I better incorporate the concepts of cultural diversity, community, and sense of place, into an existing high school, interdisciplinary, environmental studies curriculum? Moving from an overview of the foundational literature on biodiversity, I next looked at literature in the emerging field of biocultural diversity, before concluding with a review of place-based education as a means of facilitating a deeper “nature-culture” nexus in my students. Chapter Three will build upon this research as I discuss first the need for, and then the specifics of a unit to be built upon throughout the year, with which I will attempt to foster a deeper sense of connection between my students and community, both locally and globally, built and natural.
CHAPTER THREE

Methodology

Introduction

The literature review in Chapter Two has given me an outline for proceeding. I want to address the connections between humans and nature through a biocultural lens, incorporating aspects of place-based education. I want to make the connections between natural and human communities more explicit. Finally, I want to facilitate more personal connections by exposing ESHS students to local indigenous people and cultures, and to other communities to study how people in those places are connected to the land and their communities.

I am envisioning a sub-unit in the first trimester, to be built upon throughout the year, where principles of environmental sustainability and biocultural diversity provide the framework for student learning. My hope is that making these ongoing, and increasingly personal, connections will encourage students to consider not only how changes in the environment over time have affected natural communities, but to also consider what impact, if any, these changes have on our local culture, our communities, and the quality of our lives.

The question remains how I will do these things. Chapter Three will build upon the previous chapters, as I describe the setting for addressing my capstone question, briefly explain my school’s current environmentally focused curriculum, and introduce the
specific framework that I will use to bridge the gap between people and place that I perceive in that curriculum.

**School Setting and Participants**

The curriculum is being developed for an environmentally focused high school, which for purposes of this capstone I have referred to as the Environmental Studies High School (ESHS). Although the student population at ESHS is small, with roughly four hundred students attending each year, it tracks the overall District student population in terms of demographics. Almost 20% of students meet the federal free and reduced lunch requirement and 17% are students of color, a number rapidly growing across the district as a large number of immigrant families continue to move into the area. While not a demographic that is tracked, a significant percentage of students at ESHS identify as lesbian, gay, bisexual, or transgender. They join other students who have chosen this school because they do not fit in, or feel comfortable in the much larger high schools in the district. Thus, there is an informal, somewhat “alternative” feeling to this particular community of learners and teachers.

As outlined earlier in this capstone, the four hundred students at ESHS are assigned to one of four houses, with “house” being both a physical space and a daily learning experience. For three hours each day, the subjects of language arts, environmental science, and social studies are applied to the study of complex issues related to the environment. As a member of the three-person, Gold House team of teachers, it is my job to integrate social studies into this interdisciplinary model. While the House curriculum is broad and incorporates almost every aspect of social studies, the District requires that
seniors earn a credit in human geography, so that is a particular areas of focus for me. Of course, units and lessons must also be developed with state and national standards in mind.

It is worth noting here that although our teaching team does sometimes address all House students together at one time, it is more common for us to collectively set an introductory stage for the day’s learning through a broad overview and then break students up into thirds. We rotate the students, in thirds, through three different lessons; each led by one of the teachers, focusing on a specific aspect of our respective disciplines and subject-specific standards. But the lessons are not discrete, and we are constantly making connections among science, social studies, and language arts content.

The Current Curriculum

My research question: *How can I better incorporate the concepts of cultural diversity, community, and sense of place, into an existing high school, interdisciplinary, environmental studies curriculum?* began emerging during our first trimester unit on biodiversity. Students develop an understanding of networks and systems and apply that knowledge to the study of plant and animal species within particular ecosystems and biomes, and specifically to the declining diversity of those various plant and animal species.

Although students study local plant diversity, the unit is largely centered on the study of ethnobotany, and declining plant diversity in the Amazon Rain Forest through the book *Tales of a Shaman’s Apprentice* (1994), and the decline of animal species in similarly exotic locations like Madagascar, Indonesia, and Zaire in *Last Chance to See*
(1990). From my perspective, the study of cultural diversity seemed tacked on rather than being fully integrated into this more developed study of natural diversity in the plant and animal kingdoms. As an example, lessons on cultural diversity included the Ladakh and Kashmir, Estonia, and dying languages of Native American tribes of the desert southwest, none of which were geographic areas included in our detailed studies of plant and animal biodiversity.

Similarly, while students did study the U.S. Dakota War of 1862 before doing a field study at Ft. Snelling that includes a study of indigenous and invasive plants, there was no meaningful exploration of Dakota culture, or the importance of place to that culture, in preparation for the field study. Finally, while we studied local communities and agricultural practices later in the year, I felt the connection between people and place was lacking and would be enhanced by introducing it earlier in the year as part of the first trimester unit.

**Methods**

In looking to the coming school year(s), I think there is great potential to focus more deeply on the connection between humans and natural systems by studying people and their relationship to the land in both distant and local communities, beginning with those indigenous populations found in the geographic areas we are already studying in *Tales of a Shaman’s Apprentice*, and progressing to study local populations, of both Native American and European heritage. I intend to create a unit that will utilize general aspects of biocultural diversity and place-based education as foundations for that study.
Although my district does not require a particular curricular model, it has expressed at least some preference for the Understanding by Design® model (Wiggins & McTighe, 2006), as it is used in department meetings. Perhaps more importantly here, it is a model with which I am familiar from my MAT classes; it is a model that I believe in, and one that fits comfortably with my goals of creating a compelling unit that complies with state standards.

To understand the attraction of the UbD™ model, it helps to look at what came before. Kelting-Gibson (2005) maintained that the aim of traditional curriculum development has generally been to develop a series of activities to cover a particular topic, using the following approach: (1) define the educational goals and objectives, (2) define activities related to those goals, (3) organize the experiences and activities into lessons, and (4) evaluate whether the goals were achieved (p. 26). In creating the Understanding by Design framework, Wiggins and McTighe (1998) rejected this model as being likely to promote “hands-on” activity based, but not “minds-on” learning; or likely to promote coverage-oriented instruction where teachers merely checked off topics in a textbook before moving on to the next one.

McTighe and Wiggins reversed the traditional order of planning in order to emphasize that the desired outcome is not a series of engaging lesson, or to cover a lot of content in a text. They proposed instead that a well-designed unit should be premised on specific and meaningful goals, and then “lay out the most effective ways of achieving (those) specific results” (Wiggins & McTighe, 2006, p. 14). Quite simply, the goal of UbD is to focus on the learning before focusing on the teaching.
The UbD framework has three stages: 1. Identify desired results, 2. Determine acceptable evidence, and 3. Plan learning experiences and instruction (Wiggins & McTighe, 2006). The first, and most critical stage requires one to identify the desired educational results. More specifically, it calls for the unit to be framed around “enduring understandings and essential questions” in relation to clear goals and standards (Wiggins & McTighe, 2006). In my case, the state standards in our three core subjects, science, social studies, and language arts, will provide the basis for determining the unit goals and ultimate objectives. However, given my personal academic focus, I decided that the essential questions, the “big ideas” that frame those objectives (Wiggins & McTighe, 2006) should come primarily from the social studies standards.

Using the one-page design template from the Understanding by Design Professional Development Workbook, I was able to identify specific standards and create directly related essential understandings and essential questions for the unit. Once those were determined I could, again using the template, determine what students should know and be able to do as a consequence of that understanding, or in response to those questions. Given that I was dealing with a larger number of standards than might be typical for a traditional single-content teacher, I found it necessary to expand each of the stage-one planning sections into a separate page. This meant that I had to continually refer back and forth, making sure that everything remained in alignment. In the end, I think it was an advantage as it forced me to be disciplined and intentional about any changes.
Having established the desired results, UbD’s second stage called on me to determine what evidence I would collect to document and validate that they had been achieved (Wiggins & McTighe 2006). How will I know that learning has taken place? How can students demonstrate their understanding? What assessments will I use? With the template, I was able to match performance tasks with specific things that I expected
students to be able to do. For example, because I said that I wanted students to be collaborative in discussing changes to indigenous culture, I knew that I would need some type of scored discussion assessment to evaluate that skill.

I should mention that in our teaching environment, we don’t rely extensively on formal assessments. Instead we tend to informally assess along the way, with points given only at critical junctures, before doing a cumulative, and fully interdisciplinary assessment at the end of each trimester. With that in mind, I created a variety of assessment tools for this sub-unit, primarily but not exclusively informal, directly tied to the knowledge, skills, and abilities that I expected students to be developing. They should directly support the yet-to-be determined group assessment at the end of the first trimester.

With desired results established, and a plan in place for how I would measure those results, I was ready for the third and final stage, planning the learning activities themselves; the day-to-day lessons that will allow students to engage with, develop and demonstrate the desired understandings (Wiggins & McTighe, 2006). In my case, I looked at the lessons and activities that we had used this past year in our study of biodiversity and considered ways to build on, and add to them in order to connect them to my new goals and objectives. I thought of new things that I could do in my rotation with students to enhance the connection between people and place at the heart of my new sub-unit. I also considered ways that I could better incorporate Smith’s (2002) characteristics of place-based education, specifically real-world problem solving and direct involvement with the local community.
Just as I connected assessments to the specific skills that I had identified as being important for students to master, the template also helped me to connect those skills to the lessons and specific learning activities that would develop them. Because the goal of the unit was to heighten the connection between human and natural systems, and to create a better understanding of the role of place in shaping culture and creating communities, I decided to repeat SWBATs #1 and #3 (see UbD Stage One plan in Chapter Four) in several lessons, both to emphasize their importance, and to give students additional opportunities to understand, and be able to demonstrate understanding of the concepts.

I was also mindful of Wiggins and McTighe’s assertion that “understanding is not one achievement but several, and it is revealed through different kinds of evidence” (2006, p. 82). Thus, I made sure to incorporate multiple facets of understanding into my lessons, to ensure that in the end, students should be able a) to explain by making insightful connections and providing examples; b) interpret by providing a historical or personal dimension to ideas or events; c) apply the learning in diverse and real world scenarios; d) have perspective, empathy, and the self-knowledge to be aware of the limits of individual knowledge; and e) to incorporate the experiences of others (p. 84).

Finally, I decided to build most of the group activities in the lessons around pod groups. This was partly out of expediency; students are arranged in groups of ten into ten pods that surround the perimeter of the House “centrum.” They sit together in their pods and keep their materials and personal things at desks arranged together behind a “pod wall.” Since they know their pod groups, it’s a fast way to divide students into groups of ten. But, I also focused on pod groups because this unit takes place in the first trimester.
ESHS students have been working together in pods since their junior year, but these will be new groups with new personalities. It is important for students to learn to work with and rely on their pod-mates. As we move into the second and third trimesters, we will increase the level of independent work, and also mix up the group dynamics by creating different small groups for projects and lessons.

Summary

In Chapter Three, I described my school setting, the current curriculum, and a gap that I perceive in that environmentally-focused curriculum. I discussed the need to enhance the current study of natural and human cultural systems by emphasizing the connection between people and place, in both distant and local communities. Finally, I introduced the Understanding by Design curricular framework. I will use this model to develop a sub-unit, which will be overlaid with our existing first trimester, nature-focused study of biodiversity. Chapter Four will be a presentation of that unit, incorporating state standards and elements of place-based education, in response to my research question:

*How can I better incorporate the concepts of cultural diversity, community, and sense of place, into a high school, interdisciplinary, environmental studies curriculum?*
CHAPTER FOUR

Results

Introduction

Chapter Four consists first of a unit overview, and then a three-stage plan detailing a sub-unit to supplement an existing first trimester unit on biodiversity. Applying the UbD framework, Stage One will involve identifying desired results, the specific academic standards and goals, and the enduring understandings and essential questions that flow from them, to be addressed in the unit. Stage Two will include specific assessments, and Stage Three the specific lessons and instructional strategies that will be used to build the student knowledge and abilities that will be assessed.

Unit Overview

**First Trimester Unit Title:** The Dynamics of Diversity

**Sub-Unit (this unit):** Connecting People, Culture, and Place

**Grade Level:** 12

**Time Frame:** 6-7 weeks

**Summary and Context:**

This unit plan describes a sub-unit that will take place within the first 6-weeks of a larger 10-week unit. Lessons take place in the context of a three-hour interdisciplinary course, and are typically one of three lessons occurring simultaneously during that timeframe. I will sometimes, though not always, allude to the other lessons, or “rotations,” but it should always be assumed that the lessons presented are not in a
vacuum, and that students are focusing on the issues from multiple, interdisciplinary, perspectives for 3-hours each day, 15-hours each week.

The lessons in this sub-unit are intended to focus on connections between human and natural systems, supplementing lessons on nature and biodiversity that take place within the first trimester unit. The idea is to introduce human elements of culture and community along with that study (of biodiversity and natural systems). The goal is to create a fuller, and more personal, understanding of the people residing in places that we are already studying from a natural perspective in that first trimester. Taking advantage of prior knowledge, the lessons begin with Amazonian tribes featured in the students’ summer reading, *Tales of a Shaman’s Apprentice*, and other indigenous groups in the region. Early lessons are focused on strengthening students’ understanding of the inextricable links between natural and human systems (biocultural connections), raising awareness of the negative pressures of a global economy on maintaining those connections, and developing an understanding of place as more than a physical location.

As we move to the middle weeks of the sub-unit, students will take their learning and apply it closer to home. We will continue to examine the links between biological and human systems, now folding in local Native American perspectives of culture and place, and studying the inevitable conflicts that arose with the arrival of European settlers who had very different values, and competing economic interests. We will next incorporate some critical field studies as we look at present-day efforts to restore cultural connections, through language, within these communities. The sub-unit culminates in a student-led research and oral-history project, where students will be asked to apply their
emerging understanding of place to the county where they live, and where our school is located.

The larger unit will then segue into a study of biodiversity in the animal world, endangered species, management and economics that will take us to the end of the first trimester. After that, the second trimester will focus on population and challenges to global sustainability, essentially ways that humans have thrown natural systems out of balance. The final trimester follows with a positive focus on sustainability, or ways that we might restore that balance.

My intention throughout the year will be to continually revisit the goals, enduring understandings and essential questions raised in this first trimester sub-unit, and to continue focusing on the connection between humans and their natural environment. My hope is that doing so will instill a more concrete sense of community and place-based consciousness throughout the year, so there is a real sense of connection, and concern, for the places we address. Finally, it is my wish that raising this awareness in students will motivate them to become active citizens prepared to provide a positive and sustainable answer in response to the senior capstone question they will address at the end of the year: “How then, shall I live?”

**Instructional Strategies:**

I will use a variety of instructional methods and strategies throughout the unit in order to make the material engaging and accessible to all students. Because I personally believe that critical thinking skills are the single most important tool we can give to students as they move to adulthood, many of the unit activities will stem from this core
focus, including a philosophical chairs activity and jigsaw involving multiple perspectives. Since I also believe that self-awareness heightens critical thinking, I’ve included many opportunities for students to reflect both individually in writing, and through think-pair-shares, and small group conversations.

Scaffolding is evident as students are asked to revisit prior lessons and concepts (e.g., systems) from a different context or perspective, building both knowledge and, again, critical thinking. Similarly, gradual release of responsibility will be utilized throughout the unit as I model the use of graphic organizers and key concepts, and then ask students to practice their developing skills. Other key methods will include field studies, classroom workshops, and pushing my comfort zone a bit, “representing to learn” as students use various examples of film, art, poetry, and literature to create tableaus, lyric poems and other artistic representations.

Finally, I have very intentionally pulled in as many different personal voices and perspectives as I dare in the timeframe given. It was important for me that students not just read about these connections, but experience for themselves the passion that people have for these topics. We will have to settle for films in some cases, but I have arranged both for people to come to us, and even better, for us to go to them, throughout the unit.
UbD Stage 1: Desired Results

**Established Goals: State Standards in Science, Social Studies, and Language Arts**

<table>
<thead>
<tr>
<th>Life Science Standard 9.4.4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human activity has consequences on living organisms and ecosystems</td>
</tr>
</tbody>
</table>

Benchmark 9.4.4.1.2: Describe the social, economic, and ecological risks and benefits of changing a natural system as a result of human activity.

Benchmark 9.4.4.1.3: Describe contributions from diverse cultures, including Minnesota American Indian tribes and communities, to the understanding of interactions among humans and living systems.

<table>
<thead>
<tr>
<th>Geography Standard 9.3.3.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>The characteristics, distribution and complexity of the earth’s cultures influence human systems (social, economic and political systems).</td>
</tr>
</tbody>
</table>

Benchmark 9.3.3.7.2: Describe the spatial distribution of significant cultural and/or ethnic groups in the United States and in the world, and how these patterns are changing [and have changed].

Benchmark 9.3.3.7.3: Explain how social, political, and economic processes influence the character of places and regions.

<table>
<thead>
<tr>
<th>Geography Standard 9.3.4.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>The environment influences human actions; and humans both adapt to and change, the environment.</td>
</tr>
</tbody>
</table>

Benchmark 9.3.4.9.1
Analyze the interconnectedness of the environment and human activities . . . and the impact of one upon the other.

<table>
<thead>
<tr>
<th>Multiple Language Arts Standards and benchmarks including</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark 11.9.1.1: Participate effectively in a range of collaborative discussions on (various) issues, including those about Minnesota American Indians, building on others ideas and expressing their own clearly and persuasively.</td>
</tr>
</tbody>
</table>
### What understandings are desired?

**Students will understand that:**

- Biological and human (social, economic, and political) systems are inextricably related.
- Human activity impacts both natural and human systems.
- Systems can be understood from multiple perspectives.
- The environment influences culture, and culture influences human activity.
- Our lives are enhanced through a strong connection to the place in which we live.

### What essential questions will be considered?

- What are some connections between biological and cultural systems—both globally and locally?
- How are the destruction of land and culture connected in TOSA and/or Children of the Amazon?
- What are some economic, ecological, and cultural costs/benefits of globalization?
- How is the experience of the indigenous people in the Amazon similar to and different from the experience of the local Dakota Indians in the 1800s?
- How does the preservation of cultural histories and heritages contribute to a sense of place?
- How can a sense of place contribute to the ecological and cultural health of our communities?
**What important knowledge will students gain as a result of this unit?**

**Students will know . . .**

- That biological and cultural systems can be understood both as independent and as interconnected systems.
- That human activity affects the environment, as well as the lives and cultures of people, both locally and around the world.
- That an emotional connection to a place intensifies our relationship to, and understanding of, the place we live.
- That oral histories are an important primary source of information.

**What key skills will students acquire as a result of this unit?**

**Students will be able to (SWBAT) . . .**

1. Make connections between the biological and cultural systems of places.
2. Articulate ways that the lives of indigenous tribes, even in remote parts of the world, are connected to our own.
3. Identify ways in which human lives are enhanced through a strong connection to culture, heritage, language and the place they live.
4. Describe some economic, ecological, and cultural costs/benefits of globalization
5. Collaboratively discuss how social, political, and economic (agricultural) processes have affected indigenous communities and cultures in Minnesota.
6. Use primary sources and oral histories in order to explain how social and economic processes have affected the character of a local community.

Note: SWBATs are numbered so they can be referenced in individual lessons
### UbD Stage 2: Assessment Evidence

#### What performance tasks will allow students to demonstrate knowledge?

- Students will demonstrate their ability to make connections between the biological and cultural systems of specific places by completing an online Working Portfolio in which they identify interdependent systems in the book, *Tales of a Shaman’s Apprentice (TOSA)*.

- Students will describe some economic, ecological, and cultural costs/benefits of globalization by participating in a “philosophical chairs” activity regarding indigenous tribes in *TOSA* and the film, *Children of the Amazon*.

- Students will read, discuss, and highlight key phrases from indigenous and western literature in order to better understand personal connections to place.

- Using a jigsaw format, students will collaboratively discuss the US-Dakota War of 1862 from the US government, settler, and Dakota perspectives to better understand how social, political, and economic processes have affected indigenous communities and cultures in Minnesota.

- Students will conduct research, to include local news sources and oral histories of local residents (of multiple ethnicities) in order to produce a “Community Snapshot” that will explain how social and economic processes have affected the character of our local community over time.

#### What other evidence will I use to check for student understanding?

- Think-pair-shares
- Journal writes (ungraded, but submitted for weekly feedback)
- Group discussion
- Carousel notes following classroom discussions
- Posters reflecting brainstorming and group collaboration
- Stories and oral histories
- Gallery walks’ and whiteboard splashes (students post their own ideas and then view, reflect on, and discuss perspectives of their peers.
- Mini-conferences
- Multiple informal assessments, teacher observations, questioning, etc.
UbD Stage 3: Learning Plan

### Week One: Unit Introduction

**Overview:**

- The first week will be largely unchanged from last year. School starts on a Tuesday and the first two days will be consumed with forming pods, team building, and checking out books. Students will have homework (Capra and E.O. Wilson) on Wednesday. On Thursday, we will introduce the unit as laying the foundation for a year of study culminating in the question: **“How then shall I live?”**

- Students will have read *Tales of a Shaman’s Apprentice* (Plotkin, 1994) over the summer with instructions to annotate for examples of biodiversity and diffusion of western culture.
  - Students will discuss in their newly formed pod groups. As groups report, we will review key vocabulary for the unit (with teacher prompting, e.g., “is there a word for that?” as necessary).
  - Students will be assigned readings on systems thinking and ecological principles by Fritjof Capra, and E.O. Wilson that we will use in lessons to find examples of biological systems in *Tales of a Shaman’s Apprentice* (TOSA).

- By the end of the week, students should be gaining confidence in identifying examples of biodiversity, understanding its benefits, and in identifying different types of biological systems and ecological principles (Capra). This will position them to incorporate human systems and culture into their systems thinking in Week Two.
Week Two: It’s a Small World (and we’re in it together)

Overview:

- Lessons in the second week are focused on strengthening students’ understanding of the connections between biological and human systems, and introducing the concept of biocultural diversity. Towards the end of the week, we will begin to explore the concept of “place” as something more than a physical location.

- This week marks the start of my new unit materials—and will include new lessons each day. Unless otherwise noted, individual lesson summaries are for a 40-50 minute rotation during the 3-hour House block.

DAY 1 (SWBAT #1)

- **Opening activity:** Introduction to “biocultural diversity”

  Students have already been exposed to definitions for biodiversity in Week One. I will write two phrases: biocultural diversity and biocultural connections on the white board.

  Think-Pair-Share.
  Pairs will discuss and voluntarily share. Definitions could include: connections between ecological/biological and cultural systems, human threats to biodiversity, natural threats to human culture, etc.

  I will explain that we will look at connections between biodiversity and human culture in the coming weeks and will credit and use Terralingua’s introductory PowerPoint, found at: [http://terralingua.org/wp-content/uploads/2015/07/App-1.BCD-Introduction.pdf](http://terralingua.org/wp-content/uploads/2015/07/App-1.BCD-Introduction.pdf) (perhaps slightly modified to de-emphasize language focus for now)

- **Core activity:** Interdependent systems in TOSA.

  Working in pod groups, students will be asked to revisit an environmental science activity from Week One where they drew a representation of a natural system found in TOSA (using one of Capra’s principles of ecology). I will ask them to now include a human system within whichever framework they chose. Students will share and discuss findings before turning in the drawings. I will assess for understanding and return with comments.
DAY 2 (SWBAT #1)

• **Opening activity (entire House):**
  o At the beginning of House, students will be prompted to find strong examples of both biological and human systems in TOSA, homework readings and prior lessons. Students will be instructed to work in pod groups for 30 minutes, sharing those examples and strengthening their own notes.
  o At the end of the 30 minutes, I will ask for volunteers to share first, examples of biological systems, specifically prompting students to refer to Capra’s “ecological principles” as they do so. As examples are being given, ask whether any group has an example of a human system that either works with, or has somehow affected, that system. Continue using student examples and examples from the reading to clarify connections between human and biological systems.

• **Core activity/formal assessment:** Students will have 40 Minutes to complete an online “Working Portfolio” assessment (See Appendix).

• **Homework:** Read “A Tragedy of the Commons” by Garrett Hardin

Image retrieved from http://www.childrenoftheamazon.com

Figure 2: Bell Work Images, Day 3
DAY 3 (SWBAT #2)

Opening activity (entire House): Bell Work/ Think-Pair-Share: As they come in to House, students will be asked to look at two projected images and (Figure 2) consider the question, “In what ways are their lives connected to yours?” Pairs will voluntarily share.

- **Core activity (Part 1):** The entire House will watch the first 35 minutes of the 70-minute film, *Children of the Amazon.*

  - Students will be instructed to create 2-Column notes to record as they watch for forces of change, and examples of change. I will demonstrate:

<table>
<thead>
<tr>
<th>Examples of change</th>
<th>Forces of change</th>
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<tbody>
<tr>
<td>Once remote, outsiders “invade”</td>
<td>Gov’t policy, settlers, farms</td>
</tr>
</tbody>
</table>

- **Core activity (Part 2):** Students will be divided into 60-minute rotations.

  - Students will be instructed to start a new page and to watch for and record, again using two column notes, examples of biodiversity loss or protection and examples of cultural loss or preservation.

  - After 20 minutes (55 minute mark), I will stop the film and ask students to share some of their examples. As the discussion winds down, I will ask students to start a new page in their Journal in preparation for the final 15 minutes of the film. I will ask them to watch for and record examples of globalization/ a global economy.

- **Closing activity/informal assessment:**

  - At the end of the film, I will ask students to reconsider our opening activity and the prompt: “*How are the lives of the children of the Amazon connected to ours?*”

  - Students will have five minutes to record the prompt and to write down some thoughts, and another two minutes to share with a partner. We will take the remaining class time for pairs to share ideas with the group, to record ideas in journals, and to engage in a class discussion.

- **Homework:** Finish reading “A Tragedy of the Commons”
DAY 4 (SWBAT #1)

- **Opening activity** (entire House): Working in their pod groups, students will define “the commons” based on their homework reading. Groups will have 10 minutes to discuss and write down one agreed upon definition.
  
  - As groups share definitions, they will also be asked to give examples of “commons.” Examples might include fish in the ocean, wild game, timber in the forest. We will continue the discussion, with teacher prompting as necessary to make sure we arrive at a solid understanding.
    
    - “Does it matter if the resource is public or private?
    - If more than one person can use it, is it “common”? 
    
  - “You can’t catch the fish that I eat.”

- **Core activity: (30 min. rotations)**. Each rotation will focus on a different aspect of “The Tragedy of the Commons,” including an online fishing simulation to get a hands-on perspective of the dilemma: How much fish can you catch without depleting the reserves; who has an incentive to change their fishing habits, etc. **We will revisit the concept throughout the trimester.**

- My rotation will focus on the idea that economic “systems” are reflective of culture, and question whether Garret Hardin’s proposition that the commons must be privatized or managed in order to serve the greater good is an absolute.
  
  - We will watch a 3-minute film clip demonstrating the Tragedy of the Commons. [http://sustainabilityethics.com/tag/tragedy-of-the-commons/](http://sustainabilityethics.com/tag/tragedy-of-the-commons/)
  
  - Working in their pod groups, students will come up with examples of commons, and ways they are managed. Examples might include hunting licenses and limits, private ownership of grazing lands.
  
  - I will ask students to consider what Chico Mendes would say to Hardin’s insistence that the commons will be depleted without private ownership or government regulation. **We will watch a 5-minute segment of Children of the Amazon dealing with extractive reserves.**

- **Closing activity/ informal assessment:** “Did the Amazonian Indians need privatization or regulation in order to protect their communal assets? Why or why not?” Think-Pair-Share and report out/ group discussion.
DAY 5 (SWBAT #3)

- **Opening activity** (in rotations): An excerpt from Alice Walker’s “The Place Where I Was Born” will be projected on the Smart Board. I will also show students where the poem is located in *Reading the Environment* (pages 96-97). I will read a passage out loud, underlining key phrases.
  
  o I will ask students to consider what the phrases tell us about the author’s relationship to her home, and why that relationship is important. Call on volunteers.
  
  o Conclude the discussion with specific questions: *How does caring about a place relate to our actions?* If more prompting is needed: *Are we more inclined to protect what we care about?*

- **Core activity**. Opener will take no more than 10 minutes, and will segue into the main activity: making connections between literature and themes of culture and the “sacredness” of place (Suzuki 1997).
  
  o Pod groups will each have a different collection of four poems, short essays or excerpts from *Literary Amazonia* (2004), *TOSA*, *Earth in Mind* (Orr 2004); *Reading the Environment* (1994), or Wendell Berry’s *The Unsettling of America* (1996).
  
  o Students will be asked to select two of the works, to take turns reading out loud, and then identify, discuss and record in their journals, examples of the authors’ cultural and/or spiritual connections to place for each of the works.
  
  o Still working in pod groups, I will ask them to highlight words or phrases in each of the poems that show a personal connection to the land.

- **Closing activity/ informal assessment**: With 10 minutes left in the rotation, I will ask students to cut out their highlighted phrases. They will be taped onto a white board, creating a sort of random, lyric poem about connection to place. I will informally assess students throughout the latter half of the lesson for cooperation and group participation.

- **Homework**: In your journal. Describe a place that is “sacred” to you; be sure to go beyond physical description. Include personal experiences, family connections to this place, emotional triggers, familiarity . . . *Why is this place important to you?*
Week Three: It’s not so far from There to Here

Overview:

• Lessons in the third week take ideas from weeks one and two and bring them to our local environment; creating our own, local, understanding of “place. Before moving on, we will start the week with a philosophical chairs activity that asks students to consider links between biological and human systems, indigenous perspectives of culture and place, and to describe impacts of globalization.

DAY 6 (SWBAT #4)

• **Opening activity (entire House):** Students will be given 15 minutes, to revisit their summer annotations of TOSA, their notes from the prior week, and specifically their viewing notes from *Children of the Amazon*, to find examples of cultural diffusion and Western influence in the Amazon, and to consider both benefits and negative aspects of globalization.

• **Core activity / formal assessment** (in rotations): Students coming in to the rotation will see a prompt projected on the white board:

  o *Globalization and diffusion of culture are inevitable; we need medicines and other goods that come from the Amazonian plants and natural resources.*

  • Students will be instructed to line up on the left side of the room if they agree with the statement. Clarify that this is essentially Plotkin’s perspective in *TOSA*. He doesn’t like the impact, but sees it as inevitable and acceptable as long as tribes are compensated, and even given valuable patents for medicines developed.

  • Students disagreeing will be asked to line up on the right side of the room, directly across from those agreeing with the statement. Clarify that this is essentially Mendez’ position in *Children of the Amazon*. For him, the issue was preservation of the land and culture; money and land ownership are unacceptable concepts that are destructive to Amazonian tribal ways of life.

  • Finally, students will be instructed that it is fine for them to be neutral. Students without a firm position will be directed to seats at the back of the room, situated between the two opposing sides.

• **See Appendix for Philosophical Chairs ground rules and rubric.**
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
</table>
| **1. Summarize your final position in the philosophical chair activity.** | **2. Add a supporting argument.**  
Read your classmates response. In this box add another reason that supports his/her position. |
| **3. Add an opposing argument.**  
In this box, record an argument against what is written in boxes #1 and #2. | **4. Add your final thoughts.**  
After reading peer comments, what is your opinion now? Explain. |

Adapted from *Total Participation Techniques* (2011)

Figure 3: Discussion Carousel, Day 6
DAY 7 (revisit SWBAT #1)

- **Opening activity:** We will revisit a lesson from the first week of school where we defined a healthy ecosystem. Upon entering the rotation, students will see the following terms projected on the white board:
  
  - CONSTANCY
  - RESILIENCE

  - I will ask first, what these terms represent. I will prompt them to look at their notes for September 10 if necessary. Once someone provides the correct answer, that they are **signs of a healthy ecosystem,** I will ask for specific definitions of each term. I will add these to the slide (typing them in as students call them out), and prompt students to be sure to add this information to their notes if it is currently missing. At this point, all notes should include these definitions:

    - **Constancy:** The ability to preserve numbers; to maintain stability
    - **Resilience:** The ability to restore/rebound after a disturbance

- I will ask for examples using a specific ecosystem.

  - For example, I might ask how biodiversity in Yellowstone’s ecosystem (a known example from a prior homework reading in environmental science) can help us to better understand the terms.

  - A correct answer would be elk, moose, and bison can maintain stability, and numbers, by finding vegetation through the snow—especially near hot springs (Cunningham 2011, p. 98), or that forests are able to regenerate after a wildfire.

- After this brief refresher, I will ask students to consider how these terms might apply to human systems—and specifically to cultural systems.

- After giving them a few minutes to jot down ideas, I will ask them to turn to a partner and engage in a Think-Pair-Share. They will be asked to record specific examples in their journals.
DAY 7 (cont.)

- **Core activity**: Students will work in pod groups. Each group will be given a set of readings, documents, and web resources regarding or relating to the traditional Dakota way of life:
  
  o Dakota History and Culture (the seven council fires): [http://www.earthskyweb.com/culture.htm](http://www.earthskyweb.com/culture.htm)
  
  
  
  o Historical paintings from *Mni Sota Makoce: The Land of the Dakota*. Color plates located between pages 120-121.

- Students will be instructed to take 30 minutes to review the materials and record specific examples of ways they demonstrate that the Dakota maintained cultural stability and preserved their numbers (constancy) and were able to respond or rebound from disturbances or setbacks (resilience).

- Students will be instructed to record their findings in two-column notes that are jointly compiled, but recorded individually in each group member’s journal. This activity will continue until the end of the rotation.

- **Closing activity/informal assessment**: I will informally assess progress and assist students by walking around and meeting with groups. I expect that the art and language documents might need some additional support and coaching. I will encourage them to look for signs of physical endurance, stamina, seasonal adaptation, and cultural stability in the images shown, and words defined.

  o Towards the end of the rotation, I will let students know that we will revisit the activity later in the week.

- **No homework.**
DAY 8 & DAY 9 (BIO-BLITZ): All prior SWBATs apply.

**Overview:** Both senior Houses will participate in a two-day field experience (Bio-Blitz), occupying the entire school day for both days.

On the first day, students will rotate through six stations set up in a Regional Park across from the school. Stations will include 30-minute training sessions in: Arc GIS (mapping tool for entering data), a fish study, a worm study, surveying skills and buckthorn identification, and native plant identification. The second day of the field study will involve follow-up work in the field, as well as some indoor rotations to review data, and practice data entry for mapping.

I have created two new rotations to emphasize the connections between people and nature (biocultural understanding and sense of place).

<table>
<thead>
<tr>
<th>BIO-BLITZ 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I will accompany a local Lakota Indian healer who teaches at a local community college on a walk through both prairie and forest areas to identify native plants that have culturally been identified as having medicinal and healing properties.</td>
</tr>
<tr>
<td>• I envision allowing the healer to take the lead, telling us how various plants have been used, how the knowledge of the plants has been passed down, the cultural and spiritual importance of the plants for the local Dakota and Lakota people, and what knowledge has potentially been lost.</td>
</tr>
<tr>
<td>• I will carry a small kit allowing us to field-test some of the plants for alkaloids. Our reading of <em>TOSA</em> has discussed the alkaloid properties of medicinal plants from the Amazon. It will be interesting to demonstrate similar properties in local native plants, or discuss with our guide potential spiritual and cultural reasons for the healing properties in the event alkaloids are not present in the plants.</td>
</tr>
<tr>
<td>• Students will sketch plants and take notes in their journals as we walk.</td>
</tr>
<tr>
<td>• Training and notes from all of the day’s rotations will be essential to our field experience later in the month.</td>
</tr>
</tbody>
</table>
BIO-BLITZ 2

- I will lead a 40-minute indoor rotation focusing on Dakota and Lakota perspectives of history and place.

- Referring back to our walk in the woods (and with the healer again present) if possible), I will briefly introduce the Dakota and Lakota circular calendar and the importance of oral tradition and story telling.

- The core activity will entail:
  
  o Reading (out loud) a one-page excerpt from Margot Fortunato Galt’s *The Story in History* (1992) about the differing perspectives of land use between Native Americans and western settlers to the United States.

  o Watching a 4-minute film from the Smithsonian Institution on Lone Dog’s Winter Count.  
    [https://www.youtube.com/watch?v=XNaYrAKiZmw](https://www.youtube.com/watch?v=XNaYrAKiZmw)

  o 10 minutes to explore the Smithsonian website on Winter Counts.  

  o Students will have at least 10 minutes to *begin* the process of creating a personal winter count.

- Think-aloud and brainstorm with students, e.g., “found a starving kitten and persuaded dad to let us keep it until it died; drove with Jean from Michigan to California without stopping.”

- Students will record examples in their journals (words and/or drawings).

- **Bio-Blitz Closing Activity:** Our two-day field study culminates in an overnight camping experience in the Regional Park where we have been studying. Students will have their journals with them.

  Toward the end of the evening, around the campfire, I will ask students to share the events that they wrote in their journals as a starting point for their Winter Counts. I will encourage students to embellish on the examples, to tell a fuller oral history of the year in question.
DAY 10: All prior SWBATs apply.

- **Opening and core activity** (entire House): We will watch the complete 2-hour TPT documentary: *The Past is Alive Within Us (The US-Dakota Conflict)*. To begin:
  - I will ask students what they know about the US-Dakota War. Volunteers call out. Write on board.
  - I will project a map of our county, and point out that this land—considered the Dakota homeland and site of creation—is roughly 14 miles from our school.
  - I will ask students to take notes as they watch for key events (people, dates); and ways that the Dakota were, and are, connected to the land. I will suggest, and demonstrate by writing on the board, 2-column notes. I will add some examples as we watch the film.

<table>
<thead>
<tr>
<th>Key events, dates, people</th>
<th>Dakota connections to the land</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

  - We will break for lunch and pause at key points in the film for brief Think-Pair-Shares

- **Closing activity/informal assessment**: I will distribute post-it-notes and ask students to write down the single most important thing they learned or took away from the film.

  I will ask students to place these on the whiteboard, in no particular order. Once that is done, I will ask students to create a space in their journal for a three-column table, which I will demonstrate:

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
<th>Surprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

  Students will have 10-15 minutes to read the comments posted by their peers and complete the “debriefing form” in their journals.

- **Homework**: Students will be assigned one of four readings from three books: *Through Dakota Eyes*, *Spirit Car*, and *The Great Sioux Uprising*. The readings are first-person narrative accounts of the US Dakota War from various cultural perspectives: 2 Dakota, 1 European settler, 1 US Government official.
Week Four: It’s not so long from Then to Now

Overview:

• Lessons in week four are intended to make clear that this indigenous connection to place is not a historic thing of the past. We will start by examining different cultural perspectives of the US-Dakota War in order to better understand the social, political, and economic causes of the conflict, as well as its long-term impact on indigenous culture and the character of our community.

DAY 11 (60 minute rotation)

• Opening activity: I will initially present information on the causes and beginning of the US-Dakota War. I will credit and use a PowerPoint publicly available at http://www.slideshare.net/gherm6/the-dakota-conflict-a-brief-history. I will adapt it to include more specific references to land and cultural conflict.

• Core activity: At the end of the lecture/presentation, I will display a three-column table titled “Cultures in Conflict: Perspectives). Students will be asked to use their notes and the resources provided in the table, and take 20 minutes to find examples for each. Website links are also on Moodle.

Cultures in Conflict: Perspectives

<table>
<thead>
<tr>
<th>Native Americans</th>
<th>Settlers</th>
<th>Government</th>
</tr>
</thead>
</table>

• Closing activity/informal assessment: Students will have 10 minutes to reflect upon and begin a Journal Write addressing the question: Why does it matter whether we call it the “U.S. Dakota War” or “the Great Sioux Uprising”? What cultural perspectives come with each title?

• Homework:
  o Finish Journal Write
  o Finish assigned expert reading (Dakota, settler, or government perspective). BE PREPARED FOR A JIGSAW TOMORROW.
DAY 12 (SWBAT #5)

60-minute rotation:

- **Opening activity**: Students will have 15 minute in expert groups (the two Dakota readings will be placed together) and asked to:
  
  - Identify causes of the U.S. Dakota War from their group’s perspective
  - Identify stakeholders
  - Label the conflict from their cultural perspective (War or Sioux Uprising?) and be prepared to defend that position
  - Discuss whether the war was inevitable or could have been avoided (how)? Did your group try to avoid the conflict?

- **Core activity**: Students will remain in their expert groups, but will pause to present a 10-minute overview of the Minnesota Historical Society’s interactive website on the US Dakota War (we have looked at individual resources, but have not effectively used the website yet). Presenting to the group, I will project the Website Homepage: [http://www.usdakotawar.org/](http://www.usdakotawar.org/) (Figure 4) and
  
  - Play the 3-minute introductory video
  - Walk students through each of the interactive categories (click on each and point out highlights):
    - Dakota Homeland
    - Newcomers
    - Treaties
    - War
    - Aftermath
  
  - Students will be instructed to 30 minutes to work together, still in their expert groups, to collect information from all sections of the website that will supplement their notes and prepare them for tomorrow’s jigsaw activity, which will ask them to address:
    
    - Causes of the U.S. Dakota Conflict
    - Was it a “war”? Why or why not.
    - Cultural conflicts: Was the war inevitable?
    - Attempts to avoid the conflict
    - Outcomes and results of the conflict

- **Closing activity**: Students will have the remaining time to prepare for tomorrow’s jigsaw. They can discuss and compile notes in expert groups, finish or review expert readings, etc.
Minnesota Historical Society’s US Dakota War website
Retrieved from usdakotawar.org

Figure 4: Student Resource, Day 12
DAY 13 (SWBAT #5)

Overview: The readings have been arranged so that each pod has at least two experts from each of the various perspectives. So, each pod group has at 4 students representing (two different) Dakota perspectives, 2 students representing European settler perspectives, and 2 representing a U.S. government perspective.

- **Opening activity:** Students will be instructed to take 5 minutes to review and collect their notes.

- **Core activity/formal assessment:** Students will remain in their pods for a more comfortable and informal atmosphere.

  - They will be asked to discuss (from their expert perspectives):
    - Causes of the U.S. Dakota Conflict
    - Examples of cultural conflicts
    - Whether the war was inevitable/ attempts to avoid

  - I will hand out and explain the graphic organizer (see Appendix) that students will complete during AND after the discussion.

  - Students will have 20 minutes for discussion

  - All teachers will observe and assess assigned pod group discussions using a shared rubric (see Appendix).

- **Closing activity:** Students will have 10 minutes to complete their graphic organizers, including answering the post-discussion question.

  - I will collect and assess the graphic organizer for student understanding.
DAY 14 (revisit SWBAT #3)

- **Opening activity:** As students enter the rotation, there will be two images (Figure 5) projected with a discussion prompt. As students are still discussing, I will project another image, asking them to also discuss how long—for how many years—think this activity continued.
  
  o Think-Pair-Share and volunteers report out to full group.
  o I will supplement the discussion with facts about boarding schools:
    - Forced assimilation—religion & language
    - Often brutal
    - **Reached their peak in 1973 (!)**
    - Forced participation in off-reservation schools did not end until 1978 (Indian Child Welfare Act)

- **Core activity:** We will watch a 20-minute excerpt from “First Speakers: Restoring the Ojibwe Language” about immersion schools and efforts to regain language. I will ask students to take watch specifically for examples of:

<table>
<thead>
<tr>
<th>Cultural Importance of Language</th>
<th>Steps to Preserve Language</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Closing activity:** Inform students of similar steps being taken in the Dakota community and introduce them to the Sacred Languages website: [http://sacredlanguages.org/](http://sacredlanguages.org/) by projecting it and giving an overview of content. Website link will also be on Moodle.

- **Homework/informal assessment:** In your journal, respond to the question:
  
  o *What do we lose when we lose a language?*
  
  o You may (and should) use notes and the Sacred Language website as resources, but your journal entry should thoughtfully reflect your opinion and should not merely be copied or paraphrased from another resource.
Discuss with a partner: What’s going on here?

Images retrieved from NativeNewsOnline.net

Discuss with a partner: How long do you think this went on?

Image retrieved from IndianCountryTodayMediaNetwork.com

Figure 5: Bell Work Images, Day 14
DAY 15 (revisit SWBAT #3)

- **Opening activity:** Ask students to open their journals to notes from Day 7.
  - Ask for volunteers to share their definitions for **Constancy** and **Resilience**. Remind students that we recorded examples of constancy and resilience in the Dakota community (refer to their notes).
  - Working in pod groups, students will have 10 minutes to now record examples of challenges to these concepts. I will ask for volunteers and write examples on the board (to include):

<table>
<thead>
<tr>
<th>Challenges to Constancy</th>
<th>Challenges to Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribes forcibly broken up</td>
<td>Boarding schools</td>
</tr>
<tr>
<td>Starvation</td>
<td>Loss of language/spirituality</td>
</tr>
<tr>
<td>Disease</td>
<td>Poverty/ Alcoholism</td>
</tr>
</tbody>
</table>

- **Core activity:** Remind students of the film we watched yesterday, and of the Sacred Languages website as examples of Native American efforts to restore constancy and resilience to their communities. Rhetorically ask: How far should that go? As I introduce [Aaron Huey’s TED Talk](http://www.ted.com/talks/aaron_huey?language=en).
  - Ask students to listen for, and record,
    - Statistics that shock or surprise them
    - Challenges to constancy or resilience
    - Examples of rhetoric: Ethos, pathos, logos
      - *How* is the message delivered
      - *How* is Huey getting his message across?
    - Huey’s proposed solution to restore Native American culture

- **Closing activity:** Ask for student volunteers to share shocking statistics (there are a lot of them—child death rate, poverty, alcoholism, average male life expectancy). Introduce journal writing activity, that we will start in house if there is time, otherwise it is homework.

- **Homework/informal assessment:** Do you agree with Aaron Huey’s (absolutely serious) proposal that we should return the Black Hills to the Lakota Indians? Why or why not. Record a thoughtful response in your journal.
**Week Five: Walking in Their footsteps**

- **Overview:** As we near the end of the unit, students will be asked to again look at other perspectives, this time more directly. Week Five begins with an all-day field study to Ft. Snelling State Park and Pike Island, the Dakota homeland and site of the post-Dakota War internment camp. Next, students will have the opportunity to hear from local experts and to consider the perspective of rural residents, before struggling to balance competing land-interests and cultural perspectives.

**DAY 16: All prior SWBATs apply.**

- All-day field study at Ft. Snelling State Park and Pike Island
  - Students will be in one of six groups that have different routes and starting points, but shared activities (See Appendix).
  - My group will arrive by bus at the Historic Mendota sites and will walk across the Mendota Bridge to arrive at Pike Island.

**Day 17: All prior SWBATs apply**

- **Opening activity:** The first hour of House will be spent in pod groups, completing data entry for the DNR (Invasive species counts at FSSP) and finishing any journal entries or activities not completed yesterday.

- **Core activity:** Once all students have completed their assigned tasks, students will rotate through each of the four activities to share and discuss experiences. They will be encouraged to supplement their own journals with new information and interesting observations.

- **Closing activity/informal assessment: Tableau Series.**
  - Pod groups will have 15 minutes to create a series of four tableaus, one for each activity. They will identify one group speaker who will be responsible for presenting a brief narration between the tableaus.
  - Groups will present their tableau series in the final 10-15 minutes of House. I may ask students to limit to two tableaus for time.
  - Any remaining time will be spent on a journal reflection on the field experience (and/or it will be assigned as homework).
DAY 18 (SWBAT #6)

- **Core activity:** We will transition from our Field Study by beginning to look at how local land is currently being used and valued. Guest speakers from the Dakota County Historical Society and the University of Minnesota’s Dakota County Extension Office will address:
  
  o Population changes in the county
  o Agricultural changes in the county (land use, family connections, jobs)
  o Environmental risks and challenges (is it a local concern?)
  o Economic considerations (dominance of agriculture in MN).

- **Note:** All students will be expected to take notes, but there will be one “head note-taker” for each pod group (group or self-selected).

- **Closing activity:**
  
  o Working in pods, designated note-takers will share their notes and observations. Students will supplement their own notes.
  
  o One student per pod will create a group email thanking the speakers and asking any follow-up questions they have.

- **Homework:**
  
  o Students will read an article about the environmental effects of farming in outstate Minnesota and the indifference of residents there. [http://www.startribune.com/in-farm-country-tainted-water-is-just-the-way-it-is/311653881/](http://www.startribune.com/in-farm-country-tainted-water-is-just-the-way-it-is/311653881/).
  
  o **Journal write:** Do you agree with the attitude of the majority of local residents in the article you read? Why or why not? What do they value most about the place they live? Do you value something different? Explain.
  
  o How might they be persuaded to care more about the environment? Is it your job to do that? Explain.
Day 19: All prior SWBATs apply.

- **Opening activity: How can we ALL get what we need?**
  Students will work together in their pods to allow greater access to notes, book annotations, and other materials at their desks.
  
  - Students will be asked to consider multiple contemporary perspectives (Native American, suburban student, outstate resident, local farmers).
  
  - Students will brainstorm ways to better integrate natural, agricultural, social, and cultural systems to support and maintain sustainable communities.
  
  - Groups will have 30 minutes to discuss, compile notes, and create a poster explaining their position and ideas. They will identify one group spokesperson.

- **Core activity/informal assessment: Gallery Walk**
  
  - Students will place posters on an outside wall of their pod (so they are visible to the entire House).
  
  - Each group spokesperson will have one minute to present and explain the group’s poster, ideas, proposed solutions, etc.

Students will walk around the room to more closely observe the posters. They will be asked to record similarities, differences, and surprises in their journals.

Posters will stay up.

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
<th>Surprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

- **Closing activity.** I will handout and introduce the “Community Snapshot” activity (See Appendix). Students will sign up for a presentation date.

DAY 20: NO SCHOOL
Weeks Six: Bringing it all Home

Overview:

- In the previous weeks, students have been exposed to the biocultural diversity of particular places, and have considered the enduring nature of conflicts stemming from differing cultural connections to/and values of “place.”

- In these final weeks, students will engage in a series of workshops and largely independent work as they apply their learning to the county where our school is located: Who are its inhabitants; how has this population changed? Have peoples’ connection to the land changed? How? Why? And importantly, why does it matter? All unit SWBATs apply.

Day 21 (SWBAT #6)

- **Opening activity.** I will hand out a collection of historic photographs from Dakota County. Each image will feature a person, or group of people. Working in pod groups, I will ask students to choose one photo.

  Note: Before starting the activity, I will give some instruction about looking at old photos (technology, need for long poses) and model looking for clues about location, social status, etc.

  - I will ask one person in the group to start telling a story about the picture. After 30 seconds, I will prompt them to hand the photo to another person in their pod and ask them to continue the story. We will continue until everyone has contributed.

  - “Did your group try to tell a ‘true’ story (or was it wildly made up)? If you wanted to learn the truth, what questions would you ask someone in the photo?” Ask for volunteers to report out to the whole group.

- **Core activity.** We will have three elders from our local community (Native American, European-heritage farmer, and recent immigrant) tell us their own personal histories. I will ask in advance for photos they might want to share; these will be carefully scanned and projected as they speak to us. I will prep speakers in advance to focus on an important place—and how it has changed.

  - Instead of recording chronological details, students will be asked to record facts and phrases that strike them as most interesting.

**Closing activity:** Working in pod groups, students will create posters incorporating the phrases and facts from the presentations. They will be encouraged to include artistic representations (poetry, drawings or sketches, etc.) Posters will be displayed.
DAY 22 (SWBAT #6)

Yesterday’s activity was about listening to stories and forming a connection to place, rather than actually collecting oral histories. We begin that task today.

• **Opening Activity:** Think-Pair-Share: “What is an ‘oral history’? Is it a reliable way of gathering information about a place? Why or why not?”

• **Core Activity:** Mini lesson oral

• history and its value as a primary source:
  
  o A personal story—can be autobiographical (a person telling their own life history), or biographical (telling the story of another person).

  o Oral histories are a great way to collect information about a person, a period in history or a place. We will be using oral histories to get a better understanding of the place we live. How have people come to be here? What changes have older people seen in ways to make a living? The neighborhoods that people live in? Land use?

  o Oral history can provide social and cultural information that otherwise would not be possible for us to get. We will also be looking at historical records and documents this week, but those can lack the everyday experiences of people, the “voices” that will give us a better understanding of “place” as more than a physical location.

• **Hand out and review together Minnesota Historical Society “Oral History Project Guidelines”** [http://sites.mnhs.org/library/content/oral-history](http://sites.mnhs.org/library/content/oral-history)

  o Focus on sample questions, question format, and interview tips
  o Model asking/answering questions with teachers and students taking part (open-ended; “tell me about . . . ”)

• **Closing activity:** Tell students they will be conducting a biographical oral history. As part of a larger project. They will be asked to identify someone outside of their immediate (living in the same house) family to interview.

  o The person should 1) be a resident of the county where the student lives or where our school is located; and 2) should be an elder (a generation older than your parent) unless the person has a unique story to tell about “place” (e.g., your neighbor is a recent immigrant).
Day 22 (cont.)

- Explain that students will be expected to record their interview if possible; and in any case must provide an exact transcript of questions and answers from the oral history interview.

- Students will spend the remaining time brainstorming people to interview and working on questions. They will be encouraged to brainstorm with peers to expand their own ideas and questions.

- **Homework:**
  - Over the next several days students will need to identify their subject.
  - They must have a subject identified no later than Friday, Day 25.
  - Students should come with a general description of someone they might interview and sample questions tomorrow.

Day 23 (SWBAT #6)

- **Opening activity:** Working in pairs, students will exchange potential interviewee descriptions and interview questions. Together, they will brainstorm additional questions.

- **Core activity:** Students will have in-class time to conduct research that will both inform their oral history interviews, and provide additional detail for the larger “Community Snapshot” project.

- Introduce “Community Snapshot” project (See Appendix).

- I will conduct a mini-lesson on primary materials available online and via the Dakota County Historical Society. I will model use of the resources.

  - Following the mini-lesson, students will move rotate through various workstations with a variety of local newspapers and electronic resources, including access to census data and historic maps. Guided by a research organizer (see Appendix), students will collect information about the county for their “Community Snapshot” project.

  - Students will be reminded that it is very important that they conduct research for the county where their interview subject (oral history project) resides.
Day 23 (cont.)

- I will rotate among groups and stations answering questions and offering support, and assessing student comfort-level with the assignment.

- I will provide additional one-on-one support in locating resources for the students who are not researching Dakota County (I expect very few. If there are any, they will form a single group for the Community Snapshot project).

- **Closing activity:** I will leave time for common questions and will provide time for students who have not yet taped or glued the organizer into their journal.

**DAY 24-25**

**Project Work Days:**

- Students will have time to revise their interview questions based on ongoing research and activities.

- Students will work in pod and/or Community Snapshot groups.

- Students may sign out individually or in pairs in order to conduct interviews, meet with experts or visit the County Historical Society.

- Students will be reminded that oral history transcripts are due Wednesday, Day 28. Community Snapshots will be presented in class next week Wed-Friday (Days 28, 29, and 30).

- We MAY have additional work time next week, but it will be made clear to students that they need to manage time and group work assuming that we will NOT have time in House.
CHAPTER FIVE

Conclusion

Introduction

The previous chapters have followed my capstone journey from creation of a research question and initial review of the literature, through the planning and development of a sub-unit on culture, community, and sense of place to be taught in conjunction with a first trimester unit on biodiversity. Chapter Five will include a reflection on the capstone process itself, an assessment of the literature review and findings, things I already know I will change about the unit, and next steps, including planned extensions of the unit.

Reflection

When I began the process of writing this capstone, I knew that I wanted to focus on something real. That is, something that would help me to become a better teacher in my second year of teaching. And, while I haven’t yet taught this unit, I am confident that this will be a better year, in no small part because of the intense preparation that I’ve gone through in completing this project.

By far the most difficult part of the process for me was the constant winnowing down of content. There was so much that could be done, but I had to focus on what might be possible in a relatively short timeframe early in the school year, and on what could be tied in to the existing course framework. I had to cut standards, essential questions, and specific activities at several points along the way as I realized that I was losing focus. One cut was particularly hard for me: in Week Five I intended to have students Skype
with their peers in outstate Minnesota for a broader perspective on the importance of agriculture in those communities. In that case, the focus was still relevant, I just didn’t realistically have time to include it with the necessary scaffolding; something had to give. And, even with cuts, I’m sure I’ve still got too much.

At the same time, I am also mindful in reading this now final version, that a great deal of content will be taught that is not reflected here. My capstone sub-unit covers roughly one-third of the content being addressed during the timeframe in question. It covers lessons being led by me, but there are almost always two other rotations taking place simultaneously, one of those being the science-oriented content that provides critical balance to my humanities-focused lessons. And, while that other content has definitely informed the lessons here, it has only be alluded to in passing (e.g., systems, “the commons”), or omitted altogether. To do otherwise would have dragged me even further down an already “slippery slope” to use a tired legal phrase. But, I am satisfied with the outcome. The lessons will be tremendously useful to me.

On that note, I do pause somewhat wistfully to ask: Did I really have to work this hard to develop a unit that only I am likely to use? I do wonder. I have to admit that I had no idea how difficult completing this capstone would be. I expected to be done months ago. In fact, I felt near giving up as I watched a teaching colleague complete her masters by writing two superficial research papers on assigned topics, over the course of a semester. Oh, what I would have given for such an option!

But, in the end, I do believe the struggle to write this capstone has been worth it. In having to identify a real challenge in my practice, doing the research, wrestling with
questions, honing content down to its essentials, and working backwards through a unit, I am now more comfortable with the material myself. Moreover, I am confident that the unit and lessons are meaningful. They ask difficult questions that my students need to address, and develop specific skills that my students must possess in order to become the critical thinking, active citizens that our society so desperately needs.

Assessment of Literature Review and Findings

When I began researching the question: *How can I better incorporate the concepts of cultural diversity, community, and sense of place, into an existing high school, interdisciplinary, environmental studies curriculum?* I expected the emerging field of biocultural diversity to provide an answer. But, as I got farther into the literature review, I found it taking me in a direction that I didn’t like. From my perspective, the research got bogged down in trying to establish a specific link between biological systems and *language*. I understood the interest of researchers like Maffi and Loh in finding a particular aspect of culture from which they could make explicit findings. If you are looking for data to support the connection between loss of biodiversity and loss of culture, you need measurable criteria. But, that wasn’t my need, or my interest.

As I continued with the literature review, I knew increasingly that I did not want my lessons to hinge on language. It was disheartening as I found myself cutting more and more of the language-specific biocultural research from my capstone. But it was necessary; as much as my research question was born of a sense that I had no particular “hook” for the study of culture, I knew that I didn’t want to limit myself to a single hook either. I was buoyed by the discovery that there were writers pursuing the question from
different perspectives, and was especially excited by Nabhan’s emphasis on crops and food and culture. I discovered it too late to make full use of it in writing my unit; but I will definitely come back to it.

Ultimately, it was the literature on place-based education that most informed my capstone unit. In reading Smith and Sobel, I came to understand that I already had the foundations of a strong unit. Our first trimester unit did address people and plants when we were studying TOSA. We did discuss sacred places of the Dakota. But, I hadn’t focused on that connection between people and “place.” I hadn’t raised students’ consciousness of place being more than a physical location; or, I hadn’t revisited it often enough to make those connections explicit. Whatever the cause, I knew that I hadn’t made clear to my students why, or how much “place” mattered; or more precisely, I hadn’t given them tools to make that connection themselves.

Kellert reminded me that as humans, we protect what we care about. If we don’t care, it is easy to remain indifferent. If I can help my students to see the connections between people and place, first in remote areas, and then closer to home, and to understand how culturally important this connection can be, I might inspire them to care more about their own surroundings. If they can be enticed to care, perhaps they will choose to act in a way that helps to restore some sense of balance between humans and nature.

Changes to the Unit

Before even teaching the unit, I am not satisfied with Week Six, and am starting to think through changes. My thought as I was initially working through it was that having looked at culture, community, and place, first in a remote area but from a contemporary
perspective, and then locally but primarily from a historic perspective, I would bring those strands together. The idea was to look at our local community from a contemporary perspective, including voices from the recent-past that could inform us about changes in the connection to “place.” I’m very glad to have worked through lessons for the week, and I know I will use them, but not this early in the year. I now think that the oral studies and “community snapshot” should come later in the year as we are studying challenges to sustainability, and industrial agriculture in particular. I will be sure to re-integrate the scuttled Skype conversation with local students at that point as well.

I think when I actually teach the unit, I will continue the focus on indigenous perspectives after our field study; Week Six will likely begin to bring crops and animals into the picture. I will spend time in the next couple weeks looking more closely at Nabhan’s focus on food and culture, and specifically bringing in the 2006 Nabhan and Kindscher study about the reintroduction of bison on the western Plains. I also have recent newspaper reports of young Native Americans who are working to reintroduce bison in Montana, and in doing so, trying to restore agricultural and cultural balance to tribal life there. This new focus makes sense to me from a couple perspectives, 1) it reinforces the idea that indigenous cultures are not dead, that 2) people intentionally strive to maintain connections to land, culture, and “place,” and finally, 3) it provides a strong segue to our study of endangered species and wildlife management that is typically the focus as we move from the first to second trimester.
Next Steps

I am excited for the imminent start of the school year and the chance to try out the lessons. Of course, given the environment that I teach in, and the fact that I am team teaching with two other educators, I don’t expect them to unfold exactly as written, even in Weeks One through Five. Still, I do expect my teaching to be infused with this new knowledge, and am confident that my rotations will be driven by the questions and ideas that I’ve developed in this capstone. Going forward, I plan to keep a detailed journal of the lessons as they are delivered. I will contrast my expectations with the reality, incorporate peer and student feedback, and reflect on changes that I can make to heighten student understanding when I teach the unit the following year. Importantly, however, I don’t intend for this to simply be a unit that I roll out first trimester and then put away until next year. To the contrary, I want students to continue building on this connection between people and place in order to better understand the challenges we face in the 21st Century.

The second trimester of the senior year has traditionally considered the issues of human population, urbanization and environmental health. The unit begins to get to the heart of the sustainability challenge for students. Technology has allowed for an increase in human population, and at least by traditional measures, an improvement in the quality of human life on earth; but at what cost? The industrial revolution began a process of urbanization that has accelerated rapidly with the Green Revolution and the onset of mono-cropping and the global industrialization of agriculture. We are less and less
dependent on our local environments for our subsistence, and increasingly reliant on the
global marketplace to satisfy our cultural needs and wants.

So, as we move into this important trimester, I will continue making explicit
connections between people and place; this time to explore more closely what has been
lost—both in remote areas like India, as well as in our own community. I intend to
continue incorporating Nabhan’s approach to the study of agrobiology (assuming now
that I am able to begin that focus at the end of the first trimester), specifically looking at
the relationship between local communities and the land; and how changes in farming
practices have affected culture as we embrace an increasingly global economy. This is
now the point at which I am likely to bring in the “Week Six” lessons set out in this
capstone.

By the final trimester of my students’ senior year in high school, I hope that the
connections among culture, community, and place will be somewhat ingrained. And, as a
consequence, I expect students to be wrestling personally with questions of how to live
sustainably in the 21st Century. They may feel inclined to label industrial agriculture and
globalization as “bad” or harmful to the environment, but they will have to reconcile
those opinions with their own actions as they prepare to respond to the end-of-year
capstone question, a question they will confront for the rest of their adult lives, as we all
do: “How then, shall I live?”
APPENDIX

STUDENT HANDOUTS, INSTRUCTIONS, AND RUBRICS
ONLINE WORKING PORTFOLIO:  TOSA Meets Capra

Respond to the following questions in the text box on Moodle (below these instructions). The file will automatically save with your name when you close Moodle.

• Read the inset on pp. 98-99 of TOSA, starting with “Suppose the…” and ending with “and his weapons.”

• In “Speaking Nature’s Language” Capra describes 8 principles of ecology (interdependence, development, dynamic balance, cycles, networks, nested systems, flows, and diversity).

• Remember: you may use your journal!

1. Which of Capra’s principles of ecology are best revealed in the TOSA passage? List all of the principles that are represented in the passage from best to least represented:

Again, list the best represented first.

2. Write at least a paragraph responding to the following question: Which of Capra’s principles of ecology is best revealed in the TOSA passage?

In your answer:

☐ Be careful to defend only one of Capra’s principles.
☐ Demonstrate your understanding of the interrelationships in TOSA as they relate to Capra’s principles of ecology.
☐ Write a complete answer (with beginning, middle, and end) that displays unity & coherence.
☐ Use direct quotes from the TOSA passage, citing the page number.
☐ Use direct quotes from Capra’s “Speaking Nature’s Language.”
☐ You may cite passages in other sections of TOSA to deepen your argument (cite page numbers).

3. Identify and explain at least one connection between human and natural systems in the TOSA passage. Be sure to include the specific principle of ecology in your answer.
PHILOSOPHICAL CHAIRS
GUIDELINES AND RUBRIC

After reviewing your notes, decide whether you agree or disagree with the statement on the whiteboard.

Following my directions, place your chairs in a horseshoe. Those agreeing with the statement will sit on the right side; those disagreeing facing them on the left. Students who are undecided will sit at the back (the bottom of the horseshoe).

Important Ground Rules:

• The opening speaker will take the affirmative position (agreeing with the statement)

• Speakers are required to summarize the previous speakers’ position before making a point or stating a new argument

• Once you speak, you must allow three others to speak before you can rejoin the discussion (“3 before me”)

• Cite specific examples from the text

• Ask questions

• Be respectful. No comments if someone changes position!

You will be assessed using the following simple rubric:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>1 Poor/not used</th>
<th>2 Little use</th>
<th>3 Acceptable use</th>
<th>4 Excellent use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly stated position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restated opposing position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cited Specific Examples</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asked questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respectful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dakota Conflict

JIGSAW GRAPHIC ORGANIZER

Use your annotated readings and notes during the discussion. Following my directions, use this graphic organizer during, and after the discussion.

<table>
<thead>
<tr>
<th>JIGSAW GRAPHIC ORGANIZER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name______________________ Pod #__________</td>
</tr>
<tr>
<td>Your Expert Group (cultural perspective) ________________________________</td>
</tr>
</tbody>
</table>

DURING THE DISCUSSION, RECORD EXAMPLES OF:

<table>
<thead>
<tr>
<th>Causes of the War</th>
<th>Stakeholders</th>
<th>Examples of cultural conflict (values)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMPLETE AFTER THE DISCUSSION:

In my opinion, the conflict was / was not avoidable (circle one)

Explain your answer:
• Using the rubric below, you will be graded on four criteria:

**Participation; Respect; Expert Knowledge; Note-Taking**

## JIGSAW RUBRIC

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Poor (1 pt.)</th>
<th>Fair (3 pts.)</th>
<th>Good (5 pts.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation/Discussion</td>
<td>Did not participate or contribute to the group discussion</td>
<td>Passive participation/ limited discussion</td>
<td>Participated by sharing ideas and contributed to the group discussion</td>
</tr>
<tr>
<td>Respect/Attentiveness</td>
<td>Was not attentive (or was rude) during the jigsaw discussion</td>
<td>Somewhat attentive. Was not disruptive or rude.</td>
<td>Usually attentive and demonstrated respect toward others.</td>
</tr>
<tr>
<td>Expert Knowledge (Content)</td>
<td>Did not display learning or share expert perspective</td>
<td>Displayed some evidence of learning, shared some expert perspective with the group.</td>
<td>Strong evidence of learning, understanding and sharing of expert perspective</td>
</tr>
<tr>
<td>Note-Taking/Use of Notes</td>
<td>Did not take notes during the jigsaw and/or had no prior notes.</td>
<td>Took some notes. May not have had prior notes.</td>
<td>Took notes during the presentation and had prior notes to rely on during the discussion.</td>
</tr>
</tbody>
</table>
FIELD STUDY ACTIVITY PACKET
ESHS Hike/Bike/Ramble and Managed Land Symposium

Teacher List with Cell Phone Numbers (omitted here)

Activity One

*Image Language: Poetry in Motion*
Early on in your day’s journey, read at least three of the poems in your separate literature/poetry packet OUT LOUD. Then in your journal, record 5-7 lines or phrases that interest you. Leave space between each line.

Consider the observations you’ve made as you ride or hike through the river corridor. Reread the lines of the poems you entered in your journal. What images did you see today that may connect with the lines of poetry you entered? Describe those images in the spaces below your written poetry lines. (Note: some poetry lines and today’s images may not connect -- don’t force it. On the other hand, be willing to trust your ability to put odd combinations together.)

In a small group, 3-5 people, select 12 of your words or 3 phrases (per person) to contribute to a group poem. Each person should record the constructed poem in their journal and prepare to read it OUTLOUD to the group.

*This activity will be completed near the end of the day.*

Activity Two

*Fort Snelling State Park: Tragic Commons or Managed Land?*
Timeframe: Ongoing during the day. Stop at least 3 times to update your observations.

You will have read “Tragedy of the Commons” before the day begins. Based on the reading and discussions in class, you should have a fairly strong grasp on the characteristics of both a commons and a managed land.

At an early stop, your guide will ask you to form small groups and respond to the following prompts in your journal, under the title Tragedy: ACT I. Your
responses should be supported by references to the text as well as other information you have gathered in our study.

Look around you. You have the commons of the air…near you Minnesota’s two great rivers…and soon Fort Snelling State Park. Relate the infrastructure of society you see around you to the “ruin of these commons.”

From where you stand, find three examples of Bentham’s goal of providing “the greatest good for the greatest number.” The controversy is often over what is “good”. For the examples you have picked, is Bentham’s goal being achieved?

From where you stand, give three specific examples of efforts to legislate temperance.

Having finished this short discussion, you create a new entry in your journal. Entitle this entry: Tragedy: ACT II. For this entry, divide a sheet of paper vertically, and create side-by-side to record your observations. On one side, indicate any evidence you observe that the confluence has been treated and shows the symptoms associated with a commons. On the other side of the paper, record your observations that the corridor is a managed land, showing evidence of coercions mutually agreed upon. Be specific about the objects/circumstances, its location and any inferences you make about its presence in the valley.

Near the end of the day, perhaps as you return to the staging area, complete a reflective response to the following prompt: “Based on the present status of the river corridor, and the economic and political forces affecting the corridor, will it grow into a land managed effectively for a variety of uses, or will it suffer the Tragedy of the Commons? Entitle this entry: Tragedy: ACT III

Activity Three

A special visit with (Name omitted here), Native American elder. This will take place outside of the Interpretive Center. You will be scheduled in small groups.
Field Study p. 3

Activity Four

Excerpt taken from *The Minnesota Conservation Volunteer*, Jan.-Feb. 1998 (used with permission from the Minnesota Department of Natural Resources):

...Two rivers come together: one from behind you on the left, the other behind you on the right. They forge a broad, brown flow in front of you. Where you sit on the eastern tip of an island, you’re framed by branches, triangulated by water, and swimming in history. You are sitting on sacred land—that you can feel, despite the roar of airplanes and the sight of Styrofoam, cans, and bottles washed ashore. You walk back, upon the Twin Cities’ native ground to the site where the state began.

You walk among elms and ashes and cottonwoods. Bluffs of sandstone and limestone rise before you. In 1820 a fort rose from those bluffs—a center of European-American civilization amid wilderness. Now this same place, the confluence of the Minnesota and Mississippi rivers, is an oasis of wilderness amid metropolis. For more than 175 years, the site has served as the confluence of our history’s currents.

The Mdewakanton (meda walka tun) Dakota say they were born in this place. “That’s where our people settled on Earth and became human beings,” says Gary Cavender, a spiritual advisor of the Mdewakanton. “The whole aura would be like the confluence of the Tigris and Euphrates rivers for the Mdewakanton.” They [Dakota] call it *Bdo-te*, which is both the generic word for all confluences and the particular name of this one, the archetype for all others.

Zebulon Pike landed here in September 1805 to negotiate with the Dakota, who lived in villages scattered along both rivers. Now, standing on the island named after Pike, you can easily imagine the scene.

“I had a bower or shade, made of my sails, on the beach, into which only my gentlemen [the traders] and chiefs entered,” Pike wrote in his journal. “It was somewhat difficult to get them to sign the grant, as they conceived their word of honor should be taken for the grant without any mark; but I convinced them it was not on their account, but my own that I wished them to sign it.”

Whether or not the Dakota leaders comprehended it, those marks turned over their people’s birthplace, along with St. Anthony Falls and the confluence of the St. Croix and Mississippi, to the United States. The marks also assigned the confluence a new identity: the center of American culture in the Northwest.
Field Study p. 4

Read the Dakota creation story included in your separate literature/poetry packet OUT LOUD in small groups (3-5). Agree on a appropriate and respectful pronunciation for the Anglicized version of Dakota names. Discuss the significance the story had for the Dakota people. What similarities and differences do you see from some other creation stories with which you are familiar. Record the key points of your discussion in your journal.

A Dakota Story of Creation . . .
COMMUNITY SNAPSHOT PROJECT

For the past several weeks we’ve been learning about connections between people and “place” both far away and closer to home. We’ve learned a lot, but we can only scratch the surface in class; that’s where you come in!

Working with at least one, and no more than 3 other people in your Pod Group (so, in groups of 2-4), you will create a “Community Snapshot” addressing changes in our County through the eyes of its residents.

You will present the snapshot as an exhibit you might find in a County Museum, or on display at the County Historical Society.

The guidelines are broad:

- As a group, you will identify a COMMON theme that connects the people you have chosen for your oral history project to changes that you have documented in your county research.
  - For example, you might choose to focus on agricultural changes. Your group might include an elderly farmer who sold his land to a housing development and a current soybean farmer.

- Your project must include the personal voice of EACH of your subjects that describes a connection to place.
  - How did the older farmer in the example above feel about selling his farm?
  - What caused a recent immigrant to move here? Do they feel attached to this place, or will they always be more connected to a distant “home.” Why?
Timing

- Your individual oral history transcripts are due Wednesday, Day 28.

- Community Snapshots will be presented in class on Days 28, 29, and 30 (sign up is available now on Moodle).

- Presentation of exhibits should be 5 minutes in length.

Framework for Presentations

- You or your small group may present a “standard” exhibit with artifacts, pictures and facts presented on a poster, in a PowerPoint, Prezi.

- You may present your stories in book form, with pictures and a detailed narrative, or as an iMovie documentary.

- You may also present a more unusual exhibit, something like an art exhibit, a book of poetry, or a series of songs.

Whichever format you choose, each group member will be expected to act as a museum “docent” introducing your theme, and taking turns presenting your exhibit to the class.

Requirements:

- You must balance both facts and feelings in the exhibit
- You must include visually or artistically appealing elements
- If working in a group each member must present a distinct segment of the presentation.
- You must turn in a Works Cited: At least 5 separate sources
- If working as a group, each member must contribute at least 2 sources—in addition to their oral history subject—identified on your list by member.
Oral History/ Community Snapshot
RESEARCH ORGANIZER

TAPE OR GLUE THIS PAGE IN YOUR JOURNAL

These questions are intended to get you started, not be comprehensive. You MUST include additional details in your journal.

- What year was the county established? ______________________

- What towns made up/ make up the county? Explain any changes.

- Earliest population you can find________________ year____________

- Population changes (can you explain?):
  - 1950 _________ 1970_______ 1990_______
  - Current population_____________________

- What interesting demographics are available from the 2010 Census?
  - Ideas: Median age, household income, immigration, employment, health . . .
  - What’s the strangest fact you can find? Why do you think so?

- What was the initial economy of the county based on?
  - How has the economy changed over time? Source?
  - What percentage of the population was engaged in agriculture in 1950? 1970? 1990? Today?

- Locate historic maps of the county:
  - What physical/ geographic changes do you see over time? Explain
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Exceptional 9-10</th>
<th>Well-Done 8</th>
<th>Proficient 7</th>
<th>Needs Improvement 5-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creative and Professional Presentation</td>
<td>Presentation was very creative and well organized. Reflected extra effort.</td>
<td>Presentation was creative and well organized</td>
<td>Presentation reflected some effort and was somewhat organized</td>
<td>Presentation reflected little or no effort and/or was very disorganized.</td>
</tr>
<tr>
<td>Resources and Documentation.</td>
<td>Presentation shows the use of a variety of sources of information (Works Cited included)</td>
<td>Presentation shows the use of several sources of information (Works Cited included)</td>
<td>Presentation shows little variety in the sources of information (Works Cited included).</td>
<td>Research was not reflected in the presentation and/or no Works Cited.</td>
</tr>
<tr>
<td>Addressed all of the requirements of the lesson</td>
<td>All requirements met</td>
<td>All but one requirement met</td>
<td>More than one requirement missing</td>
<td>Many requirements missing</td>
</tr>
<tr>
<td>Individual contributions are clearly represented in reference list as well as in the overall presentation*</td>
<td>Strong contribution by all group members</td>
<td>Some group members contributed slightly more</td>
<td>Some group members dominated</td>
<td>A poor group performance</td>
</tr>
<tr>
<td>Oral History component</td>
<td>Questions were effective and demonstrated a strong grasp of the topic (Accurate transcript turned in)</td>
<td>Questions were somewhat effective and demonstrated a fair grasp of the topic (Accurate transcript turned in)</td>
<td>Questions were not effective, failed to draw out the interviewee, but did reflect some knowledge of the topic (Transcript turned in)</td>
<td>Questions were not effective, did not reflect knowledge of the topic and/or no transcript was turned in).</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


quantitative measure of trends in the status of the world’s languages. Language Documentation and Conservation 4, 97-151.


Tribune, pp. SH1, SH4.

Menzel, S., & Bogeholz, S. (2010). Values, beliefs and norms that foster Chilean and German
pupils' commitment to protect biodiversity. International Journal of Environmental &
Science Education, 5(1), 31-49.


Nabhan, G. P. (2005). Renewing America's food traditions: Saving and savoring the
continent's most endangered foods. White River Junction, VT: Chelsea Green Publishing
Company.


education strategies for biodiversity education. International Electronic Journal of


Pfeiffer, J., et al. (2014). Interactive learning about biocultural diversity: University students
engage tribes. Landscape 3(1), 54-57.


