

Grand Valley State University ScholarWorks@GVSU

LIB 322: Wicked Problems of Sustainability

Liberal Studies

12-2014

The Hungry Games

Timothy Deters

Grand Valley State University, detersti@mail.gvsu.edu

Michael Garnaat

Grand Valley State University, garnaatm@mail.gvsu.edu

Isabel Gonzales

Grand Valley State University, gonzalis@mail.gvsu.edu

Megan Kupres

Grand Valley State University, kupresm@mail.gvsu.edu

Evelyn Lugo

Grand Valley State University, lugoe@mail.gvsu.edu

See next page for additional authors

Follow this and additional works at: <http://scholarworks.gvsu.edu/wickedproblems>

Recommended Citation

Deters, Timothy; Garnaat, Michael; Gonzales, Isabel; Kupres, Megan; Lugo, Evelyn; Munniksma, Ashley; Rivera, Jose; and Spencer, Nathan, "The Hungry Games" (2014). *LIB 322: Wicked Problems of Sustainability*. Paper 12.
<http://scholarworks.gvsu.edu/wickedproblems/12>

This Article is brought to you for free and open access by the Liberal Studies at ScholarWorks@GVSU. It has been accepted for inclusion in LIB 322: Wicked Problems of Sustainability by an authorized administrator of ScholarWorks@GVSU. For more information, please contact scholarworks@gvsu.edu.

Authors

Timothy Deters, Michael Garnaat, Isabel Gonzales, Megan Kupres, Evelyn Lugo, Ashley Munniksma, Jose Rivera, and Nathan Spencer



THE HUNGRY GAMES

Authors: Timothy Deters, Michael Garnaat, Isabel Gonzales, Megan Kupres, Evelyn Lugo, Ashley Munniksmma, , Jose Rivera & Nathan Spencer, Grand Valley State University.

Abstract

Environmental activist and culture critic, Wendell Berry states in “The Pleasures of Eating,” “When food, in the minds of eaters, is no longer associated with farming and with the land, the eaters are suffering a kinds of cultural amnesia that is misleading and dangerous” (Berry 2) The obesity epidemic, mass hunger, the invasion of overly-processed and GMO-contaminated foods are just a few of the frightful consequences of our society’s overall disconnect with the food system. With so many obvious shortcomings, how does one even begin to tackle the wicked problem of food? According to several culture critics, including Michael Pollan, the raising of awareness via the education of students is an excellent starting point (Pollan 2008). Following the vision of The Sprout Society—a Grand Valley State University student project proposed during the winter 2014 semester of LIB 322: Wicked Problems of Sustainability—our LIB 342: Food Matters class partnered with Black River Public Schools to create “The Hungry Games”—a nine day program that can be utilized by the school during their spring 2015 Project Term. The purpose of “The Hungry Games” is to develop food literacy and expose students to the corporate and industrial take-over of the food system. We have provided an overview of our research, design and collaborative process, a sample curriculum and an idea for the final project that instructors can use to develop, in students, the knowledge and tools to be active and critical consumers of food. “The Hungry Games” curriculum explores the following four themes: 1) Why should we care; 2) Where does our food come from; 3) Nutrition; and 4) Food Waste. Lastly, the program incorporates a variety of hands-on activities including a lesson on making green smoothies and a field trip to Holland’s Eighth Day Community Farm. Time proved to be a primary limiting factor in the development of this program. It is hoped that this program will prove successful enough for a second installment, so that these food issues can be further developed.

Introduction

“An agriculture without people becomes an agriculture dominated by agribusiness, by fossil fuels, by agrichemicals and poisons,” writes feminist, environmentalist, and philosopher Vandana Shiva in her essay “Annadana: The Gift of Food” (Shiva 105). If food is a gift—as Shiva suggests in the title of her essay—and “[t]he giver of food is the giver of life” (Shiva 104), what does this model of agriculture say about the value that the government and corporations—who control the majority of the food supply—place on our lives? By examining conventional agriculture today, one can see that the health and sustainability of both people and the environment are not priorities. “In the United States today, food has become a commodity that generates profits for large corporations,” writes Thomas Lyson in *Civic Agriculture* (Lyson 60).

However, corporations and the government are not the only ones to blame for the current food crises. Consider: What does it say about us as consumers that we have both accepted and participate in this model of agriculture? Unfortunately, finding long-term, workable solutions is a daunting task when one tries to maneuver the various political, economic, cultural and social forces that have woven themselves into the food system. Bill Heffernan notes in *Civic Agriculture* that, “The centralized food system that continues to emerge was never voted on by the people of this country, or for that matter, the people of the world. It is the product of deliberate decisions made by a very few powerful human actors” (Lyson 60). Nevertheless, we *are* participants and this too must be confronted. Thus, to tackle this wicked problem, we must be creative, strategic and intentional with our solutions. Moreover,

we must not underestimate our capabilities as food citizens (Lyson 97).

The Importance of Food Education

In the winter of 2014, a group of Grand Valley State University students identified the health and sustainability of the food system as a wicked problem, revealing that this issue is so complex that it must be approached from multiple perspectives in order to generate potential solutions (Haapala *et al.* 1). While brainstorming these solutions to the wicked problem of food, they identified the value in generating support from children. Michael Pollan echoes this sentiment in *The New York Times* editorial, “Farmer in Chief,” stating, “Changing the food culture must begin with our children, and it must begin in the schools” (Pollan 2008). They envisioned an engaging and hands-on program—The Sprout Society—for Black River Public School in Holland Michigan students to showcase the complexity of the food system and nurture students’ abilities to plant, grow, harvest and pick their own nutritious foods (Haapala *et al.* 9).

Our class wants to honor the first group’s hard work and passion for bringing about change in the food system by continuing to design a program that can be implemented during this coming project term at Black River Public Schools. They recognized the potential for children to act as drivers of positive transformation, and although we have expanded from their original design, we are nevertheless guided by their desire to create a program that cultivates Black River students’ self-sufficiency or ability to act as powerful agents in the food system.

First and foremost, we must educate ourselves not only about the conventional agriculture that proves hazardous to the health and sustainability of the Earth and all its inhabitants, but we must also learn alternative ways to be *good* food citizens. As our class brainstormed ideas for the project, many of us were frustrated by the startling lack of education in schools when it comes to food. Again, it is crucial that, as consumers, we begin holding ourselves responsible for what goes into our bodies because what goes into us becomes us. The food physically becomes our bodies, and if we can't always trust those larger institutions to make the right decisions, who is left but us?

Thus, the purpose of this class is to expose students to the obstacles that many advocates for the health and sustainability of the food system identify as getting in the way of people's access to *quality* food. Moreover, we want students to think beyond the grocery store shelves and become active consumers capable of asking the "critical questions about the quality and the cost of what they are sold" (Berry 1).

The Hungry Games: Action Plan

*Join us in the fight against overly
processed foods—may the odds be ever in
your favor!*

Before delving into the curriculum, it is important to develop the conceptual framework that guided our decisions. First, our group chose to name the class "The Hungry Games" for several reasons. First, we believe this name will appeal to students who recognize that, linguistically, it is a spin-off of *The Hunger Games*. Second, the name illuminates the proactive perspective about food that we hope the students will gain upon completing the

class. From the perspective of a culture critic, a solution to the current food crisis will require consumers to recognize that they are basically pawns in an on-going political and corporate game. It is only after this realization that one can claim one's agency and begin making positive changes. Thus, not only will the proposed project enable students to identify food-related problems/issues in their personal life, community, nation, etc., but they will be able to create steps to address these issues.

Second, we have identified the potential for this to be a great place-based educational opportunity. At its foundation, place-based education "immerses students in local heritage, cultures, landscapes, opportunities and experiences" (promiseofplace.org). PBE promotes community, social and economic vitality by enabling students to develop "strong ties between local, social and environmental organizations and their constituencies in the schools and community" (promiseofplace.org). We want those students who participate to understand that their community has a lot to offer in the fight for a healthy and sustainable food system, and with this curriculum, we want to provide them with the knowledge that they need to navigate this community with confidence. Thus, at the core of this program's mission is a sense of "community problem solving rather than individual competition" (Lyson 64) which, unfortunately, "has been the sole locus of attention and of action" in today's capitalist-driven food industry (Lyson 63).

The Hungry Games: The Process

Research

There were many factors that went into the development of “The Hungry Games.” First, we did an extensive exploration of food-related literature. This literature established the theoretical foundation for the program. Second, we examined existing food literacy programs and studies conducted on the effectiveness of these types of programs.

Literature Review

It is important to note that “The Hungry Games” is as much a practical program that can be utilized by Black River to develop food literacy in students as it is a reflection of *our* growth as students in LIB 342: Food Matters. Thus, when discussing the research that provided the foundation for “The Hungry Games,” it is impossible to separate it from the content of this course.

LIB 342: Food Matters is a fifteen week-long course at Grand Valley State University which seeks to explore the food system and the various political, social, economic and cultural factors that contribute to the shaping of the food that we consume every day. We covered a variety of subjects including the historical context of the food system, the rise of the industrial model of food production, politics and the global economy, nutrition, diseases, food justice, waste, localism and culture and gender.

For many of us, our participation in Food Matters can be viewed as a waking from a dangerous cultural amnesia, to use a term so eloquently provided by environmental activist and culture critic, Wendell Berry in “The Pleasures of Eating” (2). We came face-to-face with our own disconnect from the food system, from the “causes and effects, the possibilities and the purposes, of the life of the body of the world” (Berry 2). Further, we came to realize how alarmingly entangled we are in a corporate

and governmental game of food. As Berry further notes, “For decades now the entire industrial food economy, from the large farms and feedlots to the chains of supermarkets and fast food restaurants, has been obsessed with volume...But as scale increases, diversity declines; as diversity declines, so does health; as health declines, the dependence on drugs and chemical necessarily increases” (3). Thus, one can see that we have trapped ourselves in a vicious cycle of food production and consumption, and this cycle is ultimately eroding the health and vitality of our society.

Raj Patel reveals in *Stuffed & Starved* that, while “we produce more food than ever before, more than one in seven people on Earth are hungry” (9). But it doesn’t end there. Patel continues to note, “The hunger of around one billion people happens at the same time as another historical first: that they are outnumbered by the one and half billion people on this planet who are overweight” (9).

So, what is going on? As we delved into the different issues in the course, we began to confront the harsh reality of this wicked problem: there is no one easily identifiable solution. Part of the problem lies in the role advertising plays in influencing consumer choices—or, as many critics note, the desires of children. David Barboza states in “If You Pitch It, They Will Eat” that “Big Food Makers like McDonald’s and Kraft Foods Inc. are finding every imaginable way to put their names in front of children. And they’re spending more than ever—\$15 billion last year, compared with the \$12.5 billion in 1998, according to research conducted at Texas A&M University in College Station” (Barboza 9). While this has many harmful results, one issue in particular that arises from this form of advertising is a cultural misunderstanding of diet and nutrition.

Yet another problem is our society's overarching hegemonic individualist and capitalist ideologies. Referring to some of the insights of Marshall Sahlins, Carole Counihan states that, "in our capitalist society, food is a commodity, an object whose exchange creates distance and differentiation. Through capitalist exchange, what Sahlins calls negative reciprocity, individuals are separated from and placed in antagonistic positions toward each other" (Counihan 113). Janet Flammang argues in *The Taste for Civilization* that this pervasive individualism and capitalism has resulted in the loss of the critical community and bonding aspect of food. Others would assert that these belief systems have resulted in a cultural apathy towards the mistreatment of migrant workers—as we witnessed in the documentary, *The Harvest* (Romano 2010)—and those who produce food overseas for American consumption—as we read in the chapter from *Stuffed and Starved* (Patel 2012).

With so many obvious shortcomings, how does one even begin to tackle this wicked problem without feeling overwhelmed? Many of us in this class can attest to the overpowering realization that follows after attending class one day to basically realize that everything we do is contributing to this unhealthy system.

Coupled with our desire to do well on the assignment given to us to develop a food literacy program, this realization fueled our desire to create something that will reach the minds and the hearts of children at a time in which they are still molding and shaping their passions and identities. Overall, our research process was guided by the understanding that we needed to formulate a way to address various food issues as they pertain to middle school students. Much of this comes directly from our experiences in this liberal studies

course; however, we did design the program so that these issues were more accessible to children. It is hoped that with this introductory course, they will be inspired to further explore these issues.

Existing Research

None of the students involved in this project are education majors. Thus, to establish our ethos, we had to do quite a bit of research on food literacy programs from an educator's perspective. We were surprised to find a plethora of existing resources. To begin, there are several sources confirming the legitimacy, in general, of food literacy programs. "Eat your words," investigating the potential for food literacy to "[stimulate] a wider interest in learning and engagement in [the students] lives," (De Campo 0) expresses a sentiment similar to ours about the importance of food literacy to society as a whole. Quoting M.G Smith from his article "Food or nutrition literacy," Helen De Campo notes, "In the western world since industrialization, food has become an abstract idea conceptually separated from nature...This 'lost consciousness of the connection between food and land' can be regained by a cultivation of an appreciation of the intimate connection between our human lives and the natural world" (De Campo 1). De Campo was a Master of Education candidate at Monash University in Australia when she composed this article detailing her food literacy field research. She believes the integration of food literacy into course material is one way to address this lost consciousness. At the end of her studies she concludes, "Albeit based on a small number of sites and interviews...the resultant material tends to suggest that a better understanding of food, through gardening, cooking and eating healthily may have the capacity to engage some students in a more meaningful and relevant way to the world they live in today" (De Campo 7).

This conclusion is supported by the efforts of the Food Literacy Center in California, a nonprofit organization founded by Amber Stott in 2011. Similar to our group, Stott also identified the “need for increased education of our food system,” (foodliteracycenter.org) and spent years researching and writing on the subject. The Food Literacy Center’s vision is “to promote a food literate population in California. We help Californians understand the story of their food” (foodliteracycenter.org). More specifically, they “teach low-income elementary children cooking and nutrition to improve health, community, and the environment.” Speaking of the results of the program, the program’s website states, “We don’t rely on anecdotes to know that our programs are working. We test and measure our programs, using evaluation data to improve as we discover best practices to create lasting change” (foodliteracycenter.org). For instance, reporting on research involving K-5th graders at Capitol Heights Academy, they reveal that “In the pre-test, 59% of 4th-5th grade students believed lettuce contained the most protein when given choices between lettuce, peanuts and chocolate. After 1 month, 83% understood that peanuts contain the highest amounts of protein. Additionally, 75% of children K-5th grade say it matters where their food comes from” (foodliteracycenter.org).

Harvard University Dining Services has a similar program called The Food Literacy Project offered to college students. According to the website’s mission statement, FLP “cultivates an understanding of food from the ground up. Education focuses on four integrated areas of food and society: sustainability, nutrition, food preparation and community. Ultimately, the project goal is to promote enduring knowledge and engagement in all aspects of our food system” (www.dining.harvard.edu). FLP offers a variety of cooking classes, field

trip series, lectures, panel discussions, film screenings, volunteering opportunities and student-focused events” (www.dining.harvard.edu). Although this program is offered to college students, which is a much different demographic than those who will take The Hungry Games at Black River, our group was attracted to the multi-faceted ways in which they reached the students. When considering our own program, we decided that it would also be beneficial to the students to provide a variety of food-related experiences.

Ostensibly, the latter two programs played a significant role in the shaping of The Hungry Games. We love that both programs—the Food Literacy Center and the Food Literacy Project—emphasize the importance of community building and address the need to look at food from a variety of social, cultural, political and economic perspectives. These two programs illustrate De Campo’s point in her introduction—“food is more than just fuel for the human body to function, indeed, ‘our attitudes, practices and rituals around food are a window onto our most basic beliefs about the world and ourselves’” (De Campo 1).

Thus, after a few weeks of discussion and research we divided our program along four themes which will be discussed in more detail in a later section: 1) where our food comes from, 2) nutrition, 3) food waste and 4) overall, reasons why students should care about these food issues. At the completion of this program students will be able to utilize the knowledge presented throughout “The Hungry Games” to identify these food issues, examine areas of personal growth and compile new reasons why they should care about what they eat and how these food issues are personally, locally and globally relevant.

Methods

We designed the program through both in and out-of-class efforts. First and foremost, we spent a great deal of time researching Grand Valley State University's various library databases in order to create a solid theoretical foundation and to establish credibility. At the end of each class period, we were generally allotted an hour for group work. During the first few weeks of class, we worked together to create a proposal that was presented to the administrators of Black River for approval. This document provided only the basic information that would be needed by officials—a description of the course, the format of the program, the expected materials, transportation and budget, and lastly, potential community partners.

Following this, we then worked together to create this document, which provides a more comprehensive and in depth look at the program. This document will be used by the instructor of "The Hungry Games" as she develops a concise lesson plan. Our approach to completing this document can be characterized by creative brainstorming activities and group dialogue. It was often found that the former induced the latter.

Collaboration

The collaborative efforts of this project can be understood on two levels—the collaboration that we did as students in the class, and the collaborative ties that we hope to establish for Black River in the form of community partners.

To begin, in our own class, we experienced the many options that can be used to engage students in the exploration and evaluation of various food issues. We participated in several hands on activities, viewed short media clips, watched several food-related documentaries and engaged in the written expression of our interpretations of the food-related course

material. For instance, as a class, we tasted new foods during three themed potlucks to stimulate our senses to new flavors. During another class period, we worked together to level garden soil for the Warner Family Farm, enabling us to feel the effects of working on a farm in order to produce the food we eat. Being introduced to the documentary, *Dive*, gave us a new perspective on the condition of food waste in the United States. From this, we were able to pinpoint the various contributors to the food waste and realized that there are many local ways to at least address this issue. As a result, several students have been inspired to volunteer at the Holland Rescue Mission in order to provide the manpower that is necessary to ensure that donated food from local supermarkets are processed and used before they spoil. Additionally, the journal entries we were required to complete in the Food Matters class have significantly impacted our awareness of and ability to address food issues that we have overlooked, ignored or to which we were simply never introduced in our personal lives. Lastly, volunteering at the Holland Community Gardens gave us the opportunity be involved and make a personal connection with an organization who relies on volunteers to successfully provide over 5000 pounds of produce to people in need.

Combined, these activities have provided us with positive alternatives, suggestions and potential solutions to combat the multi-faceted, and often overwhelming, wicked problem of food. Community partners are one of the key components, which we identified, to establishing a higher comprehension of food issues from all angles. These experiences could not have been possible without help of community partners and experts and overall we would like for the two-fold method of education and collaboration of the community to translate into lifestyle

changing behaviors that impact the students as well as the community. This has given us the opportunity to develop what we have learned in our Food Matters class in to a passion to show the next generation how to make better food choices. Ostensibly, with this curriculum, we hope to replicate a similar atmosphere in “The Hungry Games.

The Hungry Games: Curriculum

It is our understanding that the students will have approximately nine days for this Project Term. Not wanting to overwhelm the students with nine separate themes spanning that time period, we chose fewer topics to cover more in depth. Below is an overview of the four themes that provide the foundation for the curriculum. For an extended version of the day-to-day curriculum, see Appendix D, Figure 1.5. In this extended version, each section contains a sample overview, tentative objectives, potential questions which can be used to generate discussion, and possible activities and media sources that could prove useful to facilitate classroom activities. In this section, we will merely provide an overview of the issues raised by these themes. With the exception of “Food Waste,” each theme will appear in two days of the curriculum, totaling seven days. The remaining two days will be comprised of a field trip to Eighth Day Farm in Holland, Michigan and a final day of reflection. We realize that these are mere suggestions, and while we hope that they all prove to be useful, the instructor is by no means obligated to follow this in full.

Why should we care?

This theme will appear on days one and eight. In this section, the students will be introduced to the fundamental understanding of why they should care about their health and the quality of food

that is produced by our conventional model of production. They will encounter the common myths about healthy eating and some facts about the most basic of nutritional needs including hydration and categorizing carbohydrates into healthier and less healthy choices. It is during this time that students will learn that we believe in their ability to make significant changes, not only in their personal health, but in society as a whole. They have volunteered to enter “The Hungry Games,” and in these nine days, they will be conditioned to tackle the various political, economic, cultural and social forces—factors contributing to a holistic understanding of food. Lastly, an intake and outtake survey will be administered on their respective days. See Appendix E, Figure 1.6 for the sample survey.

Where does our food come from?

This theme will appear on days two and five. We chose this subject because it will reflect the two realities of the food that students can expect to see throughout their lives—farm to plate practices and the complex industrial model of agriculture. On day two, students will be introduced to the fact that our food undergoes a long and involved journey from farm to plate. It is important to understand the concept “food miles” and how it impacts the food we eat. Along with that, we should be aware of the practices, processes, and regulations that are involved before the food actually gets to our place. Our society has lost a lot of control when it comes to the food journey, but there are ways to take back control.

One can begin by simply examining the origin of our food. As a continuation of the previous day devoted to this question, students will take a closer look at who and what is behind the food we eat, since it will be obvious at this point that most of the food they eat is not involved in farm to plate practices. For the sake of our health,

the environment, and the community, being aware of what goes into preparing our food is an incredibly wise thing to consider. This will involve an examination of the six biotech corporations, common preservatives, growth enhancers, feed additives, antioxidants and stabilizers that are introduced to the food that we eat at various stages in the food production and transportation process.

Nutrition

For the sake of clarity, nutrition will be held back-to-back on days three and four. Other than examining the origins of our food, another way to take back control of our health is by learning the tenets of nutrition. It is important that students are able to distinguish between unreliable sources in the media and the sort of information that can be acquired from trusted educators. Food provides nutrients for energy, and overall, a healthy functioning body. The food that we put into our bodies directly affects our health and wellness throughout the various stages of our lives. It is important for children to both identify what foods and nutrients are essential for a healthy diet and see that the processed foods that dominate our conventional food system are not a source of these nutrients. See Appendix A, Figures 1.0-1.2 for an expanded look at the aspects of nutrition that we hope will be included in “The Hungry Games.”

Field Trip to Eighth Day

After establishing with students the importance of food and introducing to them the many origins of our food, we thought it would be beneficial to visit a local farm. We selected Eighth Day Farm in Holland, Michigan primarily because it is walking distance from the school. There are several ecological, personal and social benefits to this type of field trip. Overall, students can use this trip to see exactly

where our food comes from and the processes by which food is made/grown.

Food Waste

The theme for day seven is food waste. Much of the content in previous days was focused on being a conscious consumer; however, we want student to understand the notion that they are producers as much as they are consumers. The Institution of Mechanical Engineers Report *found as much as half of all food produced around the world* never touches the mouth of a human due to issues like inadequate infrastructure, storage facilities, retailers’ strict sell-by dates, buy-one-get-one free offers and the demand of cosmetically perfect food (Global food - waste not, want not). The food waste could be used to feed the world’s growing population as well as those suffering from malnutrition and starvation. Since this is a global issue, food waste is everywhere creating an unnecessary waste of the land, water and energy resources that were used in the production, processing and distribution of the food. The UN predicts that there will be an extra three billion people to feed by the end of the century (Global food - waste not, want not). It is our duty to get the issue under control and find feasible alternatives to take care of the overabundance of food and to implement practices at home, school, and businesses to reduce the food waste.

Reflection

Day nine will be a day of reflection. This day will be primarily devoted to synthesizing the themes and answering any lingering questions. Further, this day can be used to explore topics that came up during class discussion, but didn’t wholly fit in with the schedule for the day. Emphasis should be placed on generating ideas about what students can do now that they have completed “The Hungry Games.”

Final Project

As part of the class, the students are expected to complete a final project. This project should be introduced on day 2 of the curriculum. This final project is intended to be a culmination of the course material and an introspective look into the individual student's food journey. The students should use the experiences and information that they learned in class to assist them in compiling their own food journal. The journal will contain 5 entries including one experience and one recipe that they make themselves. The other entries can be made on issues of their own discretion and can include a memorable moment, another experience, a different recipe that they tried, etc. At the end of the journal they will need to write a short reflection of approximately 500 words that looks back on their most memorable moment in the class and how they are going to use the experience to teach others. See Appendix B, Figure 1.3 for a sample final project food journal.

Recipes

Overview

Throughout the project term students will be able to utilize the curriculum that is being presented both in and out of the classroom. We want to enable them to differentiate the complexities of food on a daily basis both through the application of their written interpretation of food topics in their final project and through the exploration of new opportunities and alternatives for food consumption. This is the premise for the different recipes that can be provided to them on each of the nine days of "The Hungry Games." These recipes will encourage students to personally address issues of nutrition. Moreover, the recipes can be introduced at home to engage the family thereby

translating a consistency of nutrition in both the school and family environment. See Appendix C, Figure 1.4 for a sample of these recipes. These can of course be modified to meet the interests of the instructor and students.

Objectives

To aid in the presentation and application of these recipes, we have composed the following objectives:

- To create self-awareness and identify the ways the different ways food impacts their life
- To identify ingredients, nutritional value and methods of food preparations
- To evaluate and interpret the effects food has on personal, communal, environmental, economic, and global aspects
- To recognize opportunities to make healthier food choices and location of where they get their food
- To create a sense of accountability by preparing own food

Future Considerations

Next steps

Due to time constraints and an abundance of food issues to address and activities to create, there was obviously a lot that we left out. At the completion of the course, it will be important to both identify areas that were well received to and to highlight new avenues for areas that were overlooked by students due to content or presentation. Identifying these areas may also present a new opportunity should a continuation of "The Hungry Games" be offered the following year.

Opportunities

It is important to build upon the relationships between Black River and community partners after Project Term. It

would also be beneficial to reach out to community member that were not aware of the opportunity for collaboration or available at the time of Project Term.

There is also the opportunity for student who have completed “The Hungry Games” to continue their exploration and development of the topics presented to them by creating a new student organization or becoming involved in an existing organization within the school or community that involves gardening, cooking or nutrition. Students can also volunteer with these potential community partners at the completion of the program which will simultaneously build upon the relationship with the community partners and Black River Public Schools. This would be an excellent opportunity for students to exercise their agency as children.

Challenges and Limitations

Our class encountered many challenges throughout the research and design processes. These challenges and limitations to the project can be organized into two categories: time and collaboration.

Time

Time proved to be a limitation in several ways with regards to the development of “The Hungry Games” curriculum. One of the first issues our group encountered on the first night of brainstorming was the decision of whether or not we wanted it to be a two-week or four-week program. Even after we decided on a two-week format, we then had to grapple between a full-day or half-day design. Without this simple decision, it would be virtually impossible to proceed in the design process. On the one hand, we were concerned that there wouldn’t be enough time to effectively teach a subject like this

in half a day. Conversely, we didn’t want students to be overwhelmed by a full day. We decided that, since this would be the first time the program would be held at Black River, it would be best to offer the program for half the day. Further, we wanted to avoid the risk of having to fill time with tedious activities.

Second, time became an issue as we worked on filling up each half-day with activities. Again, we were concerned with falling into one of two extremes—offering too little and offering too much that could not possibly fit into a three-hour time slot. We had to constantly remind ourselves that, ultimately, it is the instructor’s decision. Thus, we decided that we’d rather provide her with a plethora activities than leave her with the burden of generating further ideas.

Lastly, we too are students. While many of us are unbelievably passionate about these issues, there is only so much that can reasonably be accomplished in a semester, especially as we factor in other obligations—work, family, school, etc. Recall The Sprout Society. Those students were clearly invested in tackling problems in the food system. Given the time, I’m sure they would have loved to follow their program to fruition. It can be daunting to pick up where another group left off, but our group worked hard, and we want that original group of students to be proud that their work provided the foundation for “The Hungry Games.” Our group must also be conscientious of the fact that our design could undergo significant changes between now and Black River’s Project Term this coming spring. It is also important to note that we are not education majors. Designing a curriculum is something with which we are entirely unfamiliar. Thus, we tried to make this program as adaptable as possible. We provided an extensive amount of resources

and ideas that can be utilized in whatever way the instructor sees fit.

Collaboration

Collaboration is the second major challenge/limitation that our group encountered. To begin, there were eight of us in a group. This is a rather large group to try and coordinate, yet it is not quite so large that separation is wholly necessary. At one point, we did contemplate dividing ourselves into separate groups. However, after we considered the age and personalities of each group member, we determined that the project would be best served by keeping the group together. We did however, take the time to learn each other's strengths and weaknesses so that assignments could be divided along these traits.

Since we kept a large group, it became necessary for us to develop ways to hold each of us accountable for our work. It took a few weeks to work out the kinks, but eventually we learned that it was best to designate tasks by the end of each class period so that each member understands what needs to be accomplished by the following week.

Returning to the first challenge, time especially became a limitation to our group's collaborative efforts. Again, we are all students. Many of us also work full time and have families. Thankfully, we were often allotted time to work on the project in class, but nothing can completely replace the benefits face-to-face collaboration, especially with a project of this magnitude. Thus, alternative forms of communication became monumental to our ability to work together. This includes Google Documents, Blackboard and e-mail.

Lastly, our collaborative efforts become somewhat thwarted when one factors in the

differences in educational backgrounds. This is not to suggest that any one person was less passionate about food issues. Rather, each person approached food from a different angle and had his or her own agenda when it came to healing the food system. This became obvious in the initial stages of the research. It was a struggle, at first, to weave through these differing outlooks on food. Thus, the organization of the curriculum can also be viewed as our efforts to ensure that each voice in the group was heard. While education can be viewed as one possible solution to the wicked problem of food, a proper education about this issue must also illustrate the system's complexity. Although it was difficult, at times, to coordinate the different beliefs and outlooks on food, the curriculum and the students who participate will ultimately benefit from our efforts to weave these views together.

Conclusion

Tackling the food system can be a very daunting task. In a perfect world, everyone would have daily access to fresh, nutrient-dense and chemical-free foods. Unfortunately, we live in a system with several competing social, economic, political and cultural forces which get in the way of one's ability to have quality food.

When conveying this to children, it can be especially tricky because an attempt to inspire can easily overwhelm them into inaction. By combining many hands-on activities and connecting them to community resources through field-trips, this class will provide a balance between understanding the sometimes unpleasant reality of the food system and the power

that they do have as young, creative agents for change.

References

Nutrition And Academic Performance. "NUTRITION AND ITS EFFECTS ON ACADEMIC PERFORMANCE HOW CAN OUR SCHOOLS IMPROVE?" (2010): 1-58. *NUTRITION AND ITS EFFECTS ON ACADEMIC PERFORMANCE HOW CAN OUR SCHOOLS IMPROVE?* Northern Michigan University, 28 July 2010. Web. 10 Nov. 2014.

Barboza, David. (n.d.) "If You Pitch It, They Will Eat." *The Politics of Food*. CSU Expository Reading and Writing Modules.

Berry, Wendell. "The Pleasures of Eating." Center for Ecoliteracy. n.d. Web. www.ecoliteracy.org.

Brown, Rachel, Ogden, Jane. "Children's Eating Attitudes and Behaviour: A Study of the Modelling and Control Theories of Parental Influence." *Oxford Journal Health Education Research*, 20 Dec. 2002. Web. 10 Nov. 2014.

Counihan, Carole. "Food Rules in the United States: Individualism, Control, and Hierarchy." *The Anthropology of Food and Body*. Routledge, 1999. 113-128. Print.

De Campo, Helen. "Eat your words: An investigation into food literacy as a means of stimulating an appetite for learning and engagement." *Monash University*, n.d. Melbourne: Australia.

"Global food - waste not, want not." *Appropriate Technology*, 40(1), 5. 2013. Web. Retrieved

from <http://search.proquest.com.ezproxy.gvsu.edu/docview/1326791954?accountid=39>

Haapala, Michelle; Coolman, Craig; and Groendyk, Jamie, "The Sprout Society" *LIB 322: Wicked Problems of Sustainability*. Paper 6. 2014. <http://scholarworks.gvsu.edu/wickedproblems/6>

Lyson, Thomas. "Civic Agriculture and Community Problem Solving." *Culture and Agriculture*, 27.2 (2005) Web. www.ucpress.edu

Maxwell, Louise. "Six Nutrition Myths Debunked." *Seattle Children's Hospital*. Seattle Children's Hospital, 13 Sept. 2012. Web. 10 Nov. 2014.

"Mission & History." *Food Literacy Center*. Web.foodliteracycenter.org/mission-history/

Norman, Philippa, MD, MDH. "Feeding the Brain for Academic Success: How Nutrition and Hydration Boost Learning." *Healthy Brain for Life*. Healthy Brain for Life, n.d. Web. 18 Nov. 2014.

"Nutrition and the Health of Young People." *Centers for Disease Control and Prevention*. Centers for Disease Control and Prevention, 06 Oct. 2014. Web. 17 Nov. 2014.

Patel, Raj. "Introduction." *Stuffed & Starved*. Melville House, 2012. 9-27. Print.

"Place-based Education (PBE)." *Promise of Place*. Web. promiseofplace.org.

Pollen, Michael. (2008, 10 09). "Farmer in Chief". *The New York Times*, pp. 1-14. www.nytimes.com

Smith, M.G. "Food or nutrition literacy? What concept should guide Home Economics education. *International Journal of Home Economics*, 2, pp 48-64. 2009.

The Harvest. Dir U. Roberto Romano. Globalvision, 2011. Film.

"The Food Literacy Project." *Harvard University Dining Services*. Web. 4 December, 2014.

www.dining.harvard.edu/flp/about.html

"Rethinking School Lunch Guide." *Education for Sustainable Living*. Center FOR Ecoliteracy, 2010. Web. 10 Nov. 2014.

Shiva, Vandana. "Annadana: The Gift of Food." *Spiritual Ecology: The Cry of the Earth*. California: The Golden Sufi Center, 2013. 103-109. Print.

Appendix A

Macronutrients vs. Micronutrients

Food provides nutrients for energy and a healthy functioning organism. Food contains both macronutrients and micronutrients. Although there are fundamental differences between the two, macronutrients and micronutrients are both essential energy for life. The following is an overview of the two.

Macronutrients

Macronutrients are required in large amounts in the body

- Proteins
- Carbohydrates
- Lipids (fats)

Proteins

Proteins are responsible for many vital functions carried out by our bodies

- Protein food sources
 1. Meat, poultry, fish, seafood, eggs, and milk products
 2. Beans, peas, nuts, seeds, and some plant based foods

Primary functions of Protein

- Repair and maintenance
- Energy and movement
- Enzymes, hormones, and chemical reactions
- Transportation and storage of Molecules
- Immune response
- Fluid balance
- Acid-base balance

Carbohydrates

- Carbohydrates provide a major source of energy
- Carbohydrate food sources
 1. Meats
 2. Vegetables and Fruits
 3. Grains
 4. Dairy
 5. Sugar

Primary functions of Carbohydrates

- Providing energy

- Regulation of blood glucose
- Breakdown of fatty acids
- Dietary fiber

Lipids (Fats)

Lipids (fats) are an important part of the diet

- Not all fats are bad. Stay away from too much saturated fats like butter and focus on polyunsaturated fats containing Omega 3, 6, 9 fatty acids
- Healthy fat food options
 1. Fish (omega fatty acids)
 2. Avocados
 3. Nuts
 4. Seeds
 5. Sunflower and safflower oils
 6. Olive oil
 7. Eggs

Functions of fats in the body

- Provide energy
- Absorb vitamins
- Storage for fuel
- Maintain normal body temperature
- Protect body and organs from damage by adding protective cushion
- Helps build and maintain proper brain health

Micronutrients

Micronutrients are vitamins and minerals that organisms need in smaller amounts to maintain healthy functioning.

- Vitamins and minerals can be found in a variety of food that are essential to our health.
- 10 essential vitamin and minerals your body needs
 1. *Vitamin A*- Helps with eyesight and growth and development and can be found in sweet potatoes, carrots, cantaloupe melon, most orange foods contain some vitamin A.
 2. *B vitamins*- B vitamins promote energy production and immune support and is found in whole grains, bananas, potatoes, beans, lentils, chili peppers, and molasses.
 3. *Vitamin C*- This vitamin has an antioxidant function and aids in iron absorption, strengthen blood vessels and promotes a good immune system. Vitamin C can be found in oranges, bell peppers, Brussel sprouts, grapefruit, strawberries, kiwi and cantaloupe.
 4. *Vitamin D*- Builds strong, healthy bones. This can be found in the sun, fish, eggs, and mushrooms.

5. Vitamin E- Aids in healthy blood circulation and protection from free radicals. Found in nuts, sunflower seeds, and tomatoes.
6. Vitamin K- Helps blood maintain thickness and ability to fix wounds. Found in leafy greens such as kale, broccoli, and spinach.
7. Folic acid- Aids in cell renewal and helps prevent birth defects. Found in leafy greens, asparagus, citrus fruits, beans, nuts, and seeds.
8. Calcium- Builds healthy bones and teeth. Found in dairy products, tofu, and molasses.
9. Iron- Assists in healthy blood flow and muscle building. Iron can be found in clams, oysters, beans, spinach, and lentils.
10. Zinc- Aids in immune support and growth. Found in spinach, cashews, beans, and dark chocolate.
11. Chromium- Has an energy function at a cellular level. Found in whole grains, vegetables, and herbs.

Toxicity and Modifications in our Food System

Sources of toxicity and modification include:

- Herbicides
- Pesticides
- Use of fossil fuels
- Genetically Modified Organisms (GMOs) - we can show a video on that.... Bill Nye has a good one on youtube about GMOS that is at a kids level

Diet&Disease

Improper nutrition can lead to deficiencies that creates disease (cancer, heart disease, diabetes, and other metabolic diseases)

NUTRIENT DENSITY CHART					
Kale	1000	Cantaloupe	120	Banana	36
Collards	916	Apple	91	Walnuts	35
Spinach	886	Peach	88	Almonds	33
Bok Choy	839	Kidney Beans	84	Chicken Breast	32
Romaine Lettuce	462	Green Peas	84	Low Fat Yogurt	31
Boston Lettuce	412	Sweet Potato	81	Apple Juice	30
Broccoli	395	Soybeans	74	Eggs	29
Artichoke	352	Tofu	69	Feta Cheese	25
Cabbage	344	Mango	61	Whole Wheat Bread	25
Green Peppers	310	Cucumber	59	Whole Milk	23
Carrots	288	Oatmeal	55	White Pasta	22
Asparagus	280	White Potato	53	White Bread	21
Strawberry	254	Brown Rice	49	Peanut Butter	21
Cauliflower	269	Salmon	48	Swiss Cheese	18
Tomato	197	Shrimp	46	Ground Beef	17
Cherries	197	Skim Milk	43	Potato Chips	13
Blueberries	155	Grapes	40	Vanilla Ice Cream	6
Iceberg Lettuce	132	Corn	37	Olive Oil	2
Orange	130	Avocado	36	Cola	0.6

Chart Calculated and Designed by Dr. Joef Fuhrman

Figure 1.0: Nutrient Density Chart

Food Density chart featuring the difference between processed and fresh food density. This chart also demonstrates that a calorie is not just a calorie. There is a clear difference between the calories presented in these photos.



1575 Kcal
High Energy Density

1575 Kcal
Low Energy Density

Figure 1.1: Food Density

Appendix B



Figure 1.2

MY FOOD JOURNAL

BY: ASHLEY MUNNIKSMA

Journal Entry



Entry #1 An experience

- What I did:
- Learned how to pick dill.
- Learned how to use a compound system

Draw what the community garden looked like.

A large empty rectangular box with a thin blue border, intended for drawing the community garden.

What is one thing unique that you learned about the community garden?

A large empty rectangular box with a thin blue border, intended for writing a unique learning experience from the community garden.

JOURNAL ENTRY



ENTRY #2 A healthy food choice

RECIPE I TRIED

- Greens with Cannellini Beans and Pancetta

Draw a picture of the recipe that I tried.

A large empty rectangular box with a thin blue border, intended for drawing a picture of the recipe.

What ingredients did you use in the recipe? Where did they come from?

A large empty rectangular box with a thin blue border, intended for writing about ingredients and their sources.

JOURNAL ENTRY



ENTRY #3 choose your own topic

FARMERS MARKET

- [Type list item here. Click the plus sign to add another list item.]

Draw a picture of your experience or thought

A large empty rectangular box with a thin blue border, intended for drawing a picture of the experience or thought.

What did you learn from this experience or thought?

A large empty rectangular box with a thin blue border, intended for writing about what was learned from the experience or thought.

JOURNAL ENTRY



ENTRY #4 choose your own topic

An article i read

- [Type list item here. Click the plus sign to add another list item.]

Draw a picture of your experience or thought

A large empty rectangular box with a thin blue border, intended for drawing a picture of an experience or thought.

What did you learn from this experience or thought?

A large empty rectangular box with a thin blue border, intended for writing about what was learned from the experience or thought.

JOURNAL ENTRY



ENTRY #5 choose your own topic

A documentary I saw

- [Type list item here. Click the plus sign to add another list item.]

Draw a picture of your experience or thought

A large empty rectangular box with a thin blue border, intended for drawing a picture of the experience or thought.

What did you learn from this experience or thought?

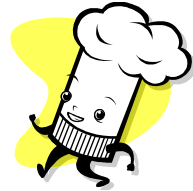
A large empty rectangular box with a thin blue border, intended for writing a reflection on the experience or thought.

FINAL REFLECTION:

Reflect on the experiences and informed that you have learned had here in the Project Term. Write a short essay reflecting on the most memorable part of your experience and how you will use your experience to teach others. Minimum of 500 words.

Appendix C

Omelet Muffins



Ingredients:

8 eggs	1/4 teaspoon salt
8 ounces cooked ham, crumbled	1/8 teaspoon ground black pepper
1 cup diced red bell pepper	2 tablespoons water
1 cup diced onion	

Directions:

1. Preheat oven to 350 degrees F (175 degrees C). Grease 8 muffin cups or line with paper liners.
2. Beat eggs together in a large bowl. Mix ham, bell pepper, onion, salt, black pepper, and water into the beaten eggs. Pour egg mixture evenly into prepared muffin cups.
3. Bake in the preheated oven until muffins are set in the middle, 18 to 20 minutes.

<http://allrecipes.com/Recipe/Paleo-Omelet-Muffins/Detail.aspx?evt19=1>

Sweet Potato Fries



Ingredients:

4 sweet potatoes, cut into large French fries	1/2 teaspoon lemon pepper
1 tablespoon water	1 pinch salt and pepper to taste
2 teaspoons Italian seasoning	2 tablespoons olive oil

Directions:

1. Preheat the oven to 400 degrees F (200 degrees C).
2. Place the cut sweet potatoes in a bowl and toss with Italian seasoning, lemon pepper, salt, pepper, and olive oil. Arrange fries on a baking sheet in a single layer.
3. Bake for 40 minutes, turning once, or until fries are crispy on the outside.

<http://allrecipes.com/Recipe/Ts-Sweet-Potato-Fries/Detail.aspx?evt19=1>

Turkey and Veggie Meatballs



Ingredients:

1 egg	1 teaspoon dried basil
1/2 cup grated carrot	1 teaspoon dried oregano
1/2 cup grated zucchini	1 pound ground turkey
1 small onion, grated	1/2 cup grated Parmesan cheese
1 teaspoon kosher salt	1/2 cup dry bread crumbs

Directions:

1. Preheat an oven to 350 degrees F (175 degrees C). Lightly grease a baking sheet.
2. Beat the egg in a mixing bowl, then stir in the carrot, zucchini, onion, salt, basil, and oregano. Add the turkey and Parmesan cheese; mix until evenly blended. Form the turkey mixture into 16 meatballs, roll in bread crumbs, and place onto the prepared baking sheet.
3. Bake in the preheated oven until the turkey is no longer pink on the inside, and the meatballs are golden brown, about 1 hour.

<http://allrecipes.com/recipe/veggie-sneak-in-meatballs/>

Black Bean Burger



Ingredients:

1 (15 ounce) can black beans, rinsed and drained	1 large clove garlic, minced
1/4 cup quinoa	1 1/2 teaspoons ground cumin
1/2 cup water	1/2 teaspoon salt
1/2 cup bread crumbs	1 teaspoon hot pepper sauce (such as Frank's RedHot®)
1/4 cup minced yellow bell pepper	1 egg
2 tablespoons minced onion	3 tablespoons olive oil

Directions:

1. Bring the quinoa and water to a boil in a saucepan. Reduce heat to medium-low, cover, and simmer until the quinoa is tender and the water has been absorbed, about 15 to 20 minutes.
2. Roughly mash the black beans with a fork leaving some whole black beans in a paste-like mixture.
3. Mix the quinoa, bread crumbs, bell pepper, onion, garlic, cumin, salt, hot pepper sauce, and egg into the black beans using your hands.
4. Form the black bean mixture into 5 patties.
5. Heat the olive oil in a large skillet.
6. Cook the patties in the hot oil until heated through, 2 to 3 minutes per side.

<http://allrecipes.com/Recipe/Quinoa-Black-Bean-Burgers/?prop31=3>

Kale Orange Banana Smoothie



Ingredients:

1 orange, peeled
1/2 cup water
1 leaf kale, torn into several pieces
2 ripe bananas, peeled

Directions:

1. Blend the orange in a blender until mostly juice.
2. Add the water and kale; blend again on High speed until kale is liquefied.
3. Break the bananas into chunks and add to the blender. Start blending on a lower speed until the banana is incorporated. Increase speed to blend the mixture into a pudding-like texture.

<http://allrecipes.com/recipe/kale-orange-banana-smoothie/>

Tropical Ice Cream



Ingredients:

4 cups frozen banana slices
1 cup frozen pineapple chunks
1 (14 ounce) can coconut milk
1 lime, juiced
1 pinch kosher salt

Directions:

1. Thaw banana slices and pineapple chunks at room temperature for 5 minutes.
2. Blend bananas, pineapple, and coconut milk in a food processor until smooth, about 1 minute; add lime juice and kosher salt and process again to mix.
3. Line an 8x11-inch baking dish with plastic wrap. Pour banana mixture into the baking dish. Freeze until the 'ice cream' is of soft-serve consistency, 30 to 45 minutes.

http://allrecipes.com/Recipe/Paleo-Tropical-Ice-Cream/Detail.aspx?event8=1&prop24=SR_Thumb&e11=banana%20ice%20cream&e8=Quick%20Search&event10=1&e7=Recipe&soid=sr_results_p1i18

Chocolate Chia Pudding

*

Ingredients:

2 tablespoons cocoa powder
2 tablespoons brown sugar
1 teaspoon hazelnut flavor instant coffee powder (optional)
1/4 cup chia seeds
1 cup milk
2 teaspoons honey, or to taste

Directions:

1. Mix cocoa powder, brown sugar, and instant coffee powder together in a bowl; stir until no lumps remain. Fold chia seeds into the mixture. Pour milk into the bowl and stir to incorporate; let the mixture sit a few minutes before stirring again. Repeat resting and stirring a few times over the course of 20 minutes.
2. Cover the bowl with plastic wrap and refrigerate 2 hours to overnight.
3. Drizzle honey over the pudding to serve.

http://allrecipes.com/Recipe/Chocolate-Chia-Seed-Pudding/Detail.aspx?prop24=RD_RelatedRecipes



Banana Pancakes with Walnuts

Ingredients:

1 teaspoon coconut oil, or more as needed	2 tablespoons vanilla extract
6 large bananas, sliced	1/2 teaspoon salt
6 eggs	1/2 teaspoon baking soda
3 tablespoons extra-virgin coconut oil	1 teaspoon ground cinnamon
	1/2 cup chopped walnuts

Directions:

1. Heat 1 teaspoon coconut oil on a griddle set to 325 degrees F (165 degrees C) or a skillet over medium heat.
2. Place bananas in the bowl of a stand mixer. Add eggs, 3 tablespoons coconut oil, vanilla extract, salt, and baking soda; beat until batter is smooth and fluffy.
3. Gently ladle batter, about 1/4 cup per pancake, onto the hot griddle; sprinkle with cinnamon and arrange walnuts on each pancake. Cook until bubbles form and the edges are dry, 3 to 4 minutes. Flip and cook until browned on the other side, 3 to 4 more minutes. Repeat with remaining batter, adding

http://allrecipes.com/Recipe/Deliciously-Healthy-Paleo-Pancakes-With-Banana-and-Walnuts/Detail.aspx?event8=1&prop24=SR_Thumb&e11=banana%20pancakes&e8=Quick%20Search&event10=1&e7=Recipe&soid=sr_results_p1i19



Fruit Leather Roll-Ups



Ingredients:

1 cup sugar
1/4 cup lemon juice
4 cups peeled, cored and chopped
apple
4 cups peeled, cored and chopped
pears

Directions:

1. Preheat the oven to 150 degrees F (65 degrees C). Cover a baking sheet with a layer of plastic wrap or parchment paper.
2. In the container of a blender, combine the sugar, lemon juice, apple and pear. Cover and puree until smooth. Spread evenly on the prepared pan. Place the pan on the top rack of the oven.
3. Bake for 5 to 6 hours, leaving the door to the oven partway open. Fruit is dry when the surface is no longer tacky and you can tear it like leather. Roll up on the plastic wrap and store in an airtight jar

<http://allrecipes.com/recipe/fruit-leather/>

Homemade Nutella



Ingredients:

1 cup, whole – nuts, hazelnuts or
filberts
2 tbsp – honey
2 tbsp – cocoa, dry powder,
unsweetened
2 tbsp – oil, coconut
1 tsp – vanilla extract

Directions:

1. Pour 1 cup of hazelnuts on a foil lined cookie sheet. Roast in oven at 400 for about 8-12 minutes.
2. When hazelnuts are slightly cool, rub between your hands by the handful and watch the skins fall off.
3. Grind nuts in a food processor or high speed blender. Add remaining ingredients and continue to blend until smooth.

<http://www.superhealthykids.com/hazlenutty-cocoa-spread-homemade-nutella/>

Honey Mustard Dipping Sauce



Ingredients:

1/2 cup mustard powder	1/2 teaspoon kosher salt
1/4 cup boiling water	1/4 teaspoon paprika
6 TBL cider vinegar	1/8 teaspoon garlic powder
1 teaspoon turmeric	1 tablespoon honey

Directions:

1. Place mustard in a small bowl. Add the boiling water, using a spatula to stir the mustard and water into a smooth paste. Stir in the vinegar. Switch to a small whisk and whisk in the turmeric, salt, paprika, and garlic powder until the mixture is smooth. Stir in the honey.
2. Cover the bowl in plastic wrap and let sit at room temperature to allow the heat of the mustard to temper.
3. Let mustard sit for up to 1 week until it reaches the desired level of heat, checking after the first 3 days.

Transfer it to a sterilized jar and store in the fridge for up to 1 month.

<http://www.superhealthykids.com/kids-favorite-nuggets-with-3-homemade-dips/>

Barbeque Dipping Sauce



Ingredients:

2 Tablespoons butter	1 teaspoon chipotle powder
1/2 cup minced sweet onion	2 teaspoons paprika
1 cup ketchup	1/2 teaspoon celery seeds
1/2 cup apple cider vinegar	1/2 teaspoon kosher salt
1/4 cup molasses	

Directions:

1. Melt butter in a medium saucepan over medium heat. Add the onion and sweat it until softened and translucent, 3-5 minutes. Add the ketchup, vinegar, molasses, chipotle powder, paprika, celery seeds, and salt. Stir to combine.
2. Simmer for 20 minutes, uncovered, stirring occasionally until thickened and darkened

<http://www.superhealthykids.com/kids-favorite-nuggets-with-3-homemade-dips/>

Ranch Dipping Sauce



Ingredients:

1 container sour cream	1/2 teaspoon garlic powder
1 teaspoon dried chives	1/2 teaspoon onion powder
1 teaspoon dried parsley	1/4 teaspoon salt
1 teaspoon dried dill weed	1/4 teaspoon ground black pepper

Directions:

1. Place sour cream and buttermilk into a mixing bowl. Season with parsley, chives, garlic powder, dill, onion powder, salt, and pepper.
2. Whisk together until smooth. Cover and refrigerate at least 30 minutes before serving.

<http://allrecipes.com/Recipe/No-Mayonnaise-Ranch-Dressing/?prop31=3>

Baked Chicken Nuggets



Ingredients:

3 skinless, boneless chicken breasts	teaspoon salt
1 cup Italian seasoned bread crumbs	1 teaspoon dried thyme
1/2 cup grated Parmesan cheese	1 tablespoon dried basil
	1/2 cup butter, melted

Directions:

1. Preheat oven to 400 degrees F (200 degrees C).
2. Cut chicken breasts into 1 1/2-inch sized pieces. In a medium bowl, mix together the bread crumbs, cheese, salt, thyme and basil. Mix well. Put melted butter in a bowl or dish for dipping.
3. Dip chicken pieces into the melted butter first, then coat with the breadcrumb mixture. Place the well-coated chicken pieces on a lightly greased cookie sheet in a single layer, and bake in the preheated oven for 20 minutes

http://allrecipes.com/recipe/baked-chicken-nuggets/detail.aspx?src=VD_Summary

Appendix D

Day 1: Introduction/Why should we care?

Overview:

In this section, the students will be introduced to the fundamental understanding of “why they should care” about their health and the quality of food that is produced by our contemporary industrial model of production. They will encounter the common myths about healthy eating and some facts about the most basic of nutritional needs including hydration and categorizing carbohydrates into healthier and less healthy choices. It is during this time that students will learn that we believe in their ability to make significant changes, not only in their personal health, but in society as a whole. They have volunteered to enter “The Hungry Games,” and in these nine days, they will be conditioned to tackle the various political, economic, cultural and social forces that get in the way of quality food.

Objectives:

- Identify the major themes that will be studied and how they fit together.
- Describe the content of the course, outcomes, the framework of the class and the kinds of things the students will be encountering throughout the two weeks.
- By the end of this day, students will be able to explain why they should care about the food system.

Questions for Students:

- What is food to you?
- Is food important to you?
- Is health important to you?

- Is the environment important to you?
- What are some problems that you notice about our current food system?
- In the past, how was food produced?

Possible Activities:

- Administer a pre-course/intake survey
- Show students a Power Point presentation. This can be used to begin conversations about and introduce students to the various topics that will be covered over the course of this Project Term.
- Show a movie or a TED talk to further introduce to the concepts soon to be discussed in class.

Media Sources:

- Robert Lustig “Sugar Hiding in Plain Sight”: <http://ed.ted.com/lessons/sugar-hiding-in-plain-sight-robert-lustig>
- Nicole Avena “How sugar affects the brain”: <http://ed.ted.com/lessons/how-sugar-affects-the-brain-nicole-avena>
- Birke Baehr “What’s wrong with our food system”: <http://ed.ted.com/lessons/what-s-wrong-with-our-food-system-birke-baehr>

Day 2: Where does food come from?

Overview:

Our food undergoes a long and involved journey from farm to plate. It is important to understand the concept of the “food miles” and how it impacts the food we eat. Along with that, we should be aware of the practices, processes, and regulations that are involved before the food actually gets to our plate. Our society has lost a lot of control

when it comes to the food journey, but there are ways to begin to take back control. One can start by simply examining the origin of our food. On this day, students should also be introduced to the final project and the function of the recipes that they will receive throughout the remainder of the course.

Objectives:

- At the end of this day, students will be able to describe the concept of food miles—how the distance our food travels impacts our CO2 footprint and the nutritional value of the food).
- Identify the differences between global and local food systems and make the connection to food miles.
- Evaluate the process of importing food. This includes the amount of food that gets imported, from where we receive this food, and some of the dangers associated with this practice.
- Explain the production, process, and transportation of food.
- Discuss the benefits of buying locally grown food in the context of the dangers associated with contemporary growing practices. This includes an introduction to farmers markets, home/community gardens and CSA participation.

Questions for Students:

- Where do you buy your food?
- How did that food get to where you bought it? Where did it come from?
- What are some factors you consider when buying food? Is where it came from a concern for you?
- How much of our food comes from other countries? What are the dangers of this? (FDA inspections, lack of laws, unsafe practices, etc).

- What are some of the ways to shorten the distance between us and our food?

Possible Activities:

- Have students bring in any kind of packaged food. Have them research where it came from, along with some of the ingredients, and make a list on the board.
Generate discussion.
- Generate a map with all the food items to help the students visualize just how far their food can travel. Compare some of the furthest and shortest distances.
- Begin to grow an herb such as basil or parsley over the remainder of the course.
The students can then prepare a dish involving the herbs they grew.
- Generate a list—from student discussions—about what they consider to be the most important factors when deciding what food to eat/buy.

Media Sources:

- “Ingredients” film: <http://www.ingredientsfilm.com/>
- Harvard Extension Hub, “Buying Local: Do Food Miles Matter”:
<http://www.extension.harvard.edu/hub/blog/extension-blog/buying-local-do-food-miles-matter>
- “Local” Documentary: <http://vimeo.com/32845880>

Days 3-4: Nutrition

Overview:

Another way to take back control of our health is by learning the tenets of nutrition. It is important to distinguish between unreliable sources in the media and the sort of information that can be acquired from trusted educators. Food provides nutrients for energy and a healthy functioning body. It is imperative to understand the basics of

nutrition. The food we put into our body directly affects our health and wellness throughout our lives. It is important for children to both identify what foods and nutrients are essential for a healthy diet and see that the processed foods that dominate our conventional food system are not a source of these nutrients.

Objectives:

- Identify the main macromolecules (proteins, fats, carbohydrates) and micromolecules (vitamins and minerals) that serve as the building blocks of nutrition (See Appendix A, Figures 1.0 & 1.1 for a sample overview of these macro and micromolecules).
- Show various foods that are rich in these nutrients.
- Express the importance of fruits and vegetables in the diet
- Explain why it is essential to maintain a healthy diet.
- At the end of this day, students should be able to recognize that a calorie is not just a calorie, but that it matters what type of calorie one consumes.
- At the end of this day, students should be able to explain the concept of food density (See Appendix A, Figure 1.2).
- Students should be able to recognize nutritionally dense foods
- Demonstrate how to plan a well-balanced nutritious meal.
- Show how to read food labels.
- Identify ingredients that may be unhealthy.
- Find healthy alternatives to common junk food.
- Explain how nutrition relates to disease and our long term health

Questions for students:

- Do you think it is important to eat healthy and exercise?

- What foods do you think are healthy and why?
- On a daily basis what types of foods do you eat?
- Do you know the purpose of proteins, fats, and carbohydrates in your body?
- Do you know why it is important to include vitamins and minerals in your diet?
- How can you be proactive in making healthier food choices?

Possible Activities:

- It would be very helpful to show parts of documentaries and video clips involving nutrition and the food system. (Food Inc., Food Matters, Fed up, Ted talks, Bill Nye)
- Give them a picture of a blank plate and have them draw a well-balanced nutritious meal that involves all of the macromolecules.
- Show pictures of food that all have the same amount of calories but vary in size and type of food to exemplify food density.
- Bring in some healthy fruits and vegetables and do taste-testings to expand their food horizons.
- Make a juice or smoothie filled with fruits and vegetables for everyone to sample.
- Have them find the nutritional value of some of their favorite foods or snacks.
- Bring in a few different food labels from healthier options to less healthy options and go over them as a class.
- Brainstorm ways to eat more fruits and vegetables.
- Have them keep a food journal to keep track of eating habits. Be sure to include portion sizes and amounts.
- Printable activity sheets found at [nourish interactive website](http://nourishinteractive.com).

Media Sources:

- www.nourishinteractive.com (here you can find free printable activity sheets)
- www.nutrition.gov (food and nutrition information center)centerfor nutrition.org
- www.fns.usda.gov/tn/nutrition-voyage-quest-be-our-best (here you can find information about lesson planning)
- http://www.ted.com/talks/jamie_oliver
- http://www.ted.com/talks/ann_cooper_talks_school_lunches
- http://www.ted.com/talks/mark_bittman_on_what_s_wrong_with_what_we_eat

Day 5: Where does food come from?

Overview:

As a continuation of the previous day devoted to this question, students will take a closer look at who and what is behind the food we eat. For the sake of our health, the environment, and the community, being aware of what goes into the preparation of our food is an incredibly wise thing to consider. Things that should be under consideration are the practices, processes, and regulations that are involved before the food even gets to our plate.

Objectives:

- By the end of this day, students should be able to summarize the elements of the production, processing, and transportation of food.
- Evaluate the use of growth enhancers, feed additives, preservatives, antioxidants, stabilizers, etc.
- Identify common preservatives and the purposes they serve.
- Explain the six biotech corporations – Monsanto, Syngenta, Bayer, Dow, BASF, and DuPont. What do they supply? What are some of their common practices?

- By the end of this day, students should be able to distinguish the difference between industrial vs. sustained farming

Questions for Students:

- Why does fruit in a can last so much longer than fresh fruit?
- Where do farmers get their supplies such as seeds and fertilizers?
- How can we avoid eating foods high in preservatives and additives?

Possible Activities:

- Taste test between items such as fresh orange juice vs. orange juice from concentrate. Real honey vs. honey flavoring. Compare taste and nutritional value.
- Take a plate of apple slices. Cover half of them in lemon juice and the other half leave untreated. Use this activity to demonstrate the purpose of preservatives.
- Compare bread with added preservatives and bread without added preservatives. Have them make short observations throughout the week on the state of each kind of bread.
- Watch parts of *The World According to Monsanto* Documentary:
<http://topdocumentaryfilms.com/the-world-according-to-monsanto/>

Media Sources:

- Birke Baehr “What’s wrong with our food system” TED Talk:
http://www.ted.com/talks/birke_baehr_what_s_wrong_with_our_food_system
- *The Politics of Food*:
<http://www2.dusd.net/staff/dstone/Resources/11ERWC/Food/FoodPolitics-Reading.pdf>
- “Convenience Foods and the Role of Preservatives”:
<http://extension.psu.edu/food/safety/educators/food-safety-lessons-for-middle->

[school-students/food-safety-in-food-processing-and-manufacturing/FSLssn12-2-10-05.pdf](http://www.school-students/food-safety-in-food-processing-and-manufacturing/FSLssn12-2-10-05.pdf) (Provides bread preservation workesheet)

- “Everything You Always Wanted to Know About Big Ag”:
<http://spectrum.ieee.org/energy/environment/everything-you-always-wanted-to-know-about-big-ag>

Day 6: Field Trip to 8th Day

Overview:

Students can use this trip to see exactly where our food comes from and the processes by which food is made/grown.

Objectives:

- Ecological Health – Discuss how growing your own food and trying to stay away from synthetic fertilizers and chemical fertilizers can affect the ecological health of this earth.
- Personal Health – Illustrate how eating the right foods can help so much with personal health. Instead treatments using drugs we should rely on preventative steps like our diets
- Social Health – Demonstrate how food can bring us together and how good family meals is good for our overall health.

Questions for students:

- What did you learn about what it takes to grow the food we eat?
- Do you see why this farm grows veggies the way that it does?
- What is something you could take away from this that could positively affect your life?

Possible Activities:

- Possibly help pick or plant some veggies
- Learn about volunteer opportunities throughout the year

Media Sources: <http://www.eighthdayfarm.com/>.

Day 7: Food Waste

Overview:

The Institution of Mechanical Engineers Report **found as much as half of all food produced around the world** never touches the mouth of a human due to issues like inadequate infrastructure, storage facilities, retailers' strict sell-by dates, buy-one-get-one free offers and the demand of cosmetically perfect food (Global food - waste not, want not). The food waste could be used to feed the world's growing population as well as those suffering from malnutrition and starvation. Since this is a global issue, food waste is everywhere creating an unnecessary waste of the land, water and energy resources that were used in the production, processing and distribution of the food. The UN predicts that there will be an extra three billion people to feed by the end of the century (Global food - waste not, want not). It is our duty to get the issue under control and find feasible alternatives to take care of the overabundance of food and to implement practices at home, school, and businesses to reduce the food waste.

Objectives:

- Demonstrate the effects of food waste
- Evaluate how much America Wastes (2012)
<http://www.nrdc.org/food/files/wasted-food-ip.pdf>
- Discuss how an overabundance of food that becomes waste, and develop some ideas that can be done instead of wasting the food.

- Illustrate that what's in trash that doesn't have to be there? View the following website for information about the subject:

<http://humaneeducation.org/blog/resource/trash-investigators/>

Questions for students:

- What's something new you can do at home to decrease the amount of food waste?
- What can the school do to decrease food waste?
- What is the main cause of food waste?

Possible Activities:

- Survey about waste
- Watch DIVE documentary
- Watch The Global Food Waste Scandal
http://www.ted.com/talks/tristram_stuart_the_global_food_waste_scandal
- Make a compost pile optional worms (feed the worms)
- Proactive Ideas: View this website about getting foods to low income farm workers to "rescue" produce that is left behind in the fields and orchards after harvest. <http://www.hiddenharvest.org/#who-we-are>
- Food and Agriculture Organization food usage effects on natural resources
<http://www.fao.org/docrep/018/i3347e/i3347e.pdf>
- Check out what kids in New York are doing to minimize food waste:
<http://www.cafeteriaculture.org/>
- Sample Lesson Plan: Dumpster Dive (cafeteria) or the lesson on this website will be an alternative
<http://humaneeducation.org/wpcontent/uploads/2013/01/TrashInv2013.pdf>

Media Sources:

- Clean your plate lesson plan: http://learning.blogs.nytimes.com/2008/05/19/clean-your-plate/?_r=0
- Food Waste and Sustainability Investigation
<http://sensor.nevada.edu/Static/Documents/Education/Washoe%20Activities/Middle%20School/8-Armbruster-5E%20Lesson-Food%20Waste.pdf>
- Consumption and Waste Curriculum Connections <http://www.nwf.org/Eco-Schools-USA/Become-an-Eco-School/Pathways/Consumption-and-Waste/Curriculum.aspx>
- Garbage Dreams- is about the outskirts of Cairo, which lies the world's largest garbage village and follows the lives of three teenage boys born into the *Zaballeen's* trash trade. http://www-tc.pbs.org/independentlens/garbage-dreams/classroom/04_garbage dreams_lesson.pdf
- No Impact week, maybe a modification of this great idea implemented throughout the week <http://noimpactproject.org/experiment/>

Day 8: Why should we care?

Overview:

The closing piece of “why they should care,” is comprised of reviewing what they have learned in class about the four major areas discussed during the course. They should be able to make the connection between caring about personal health and the quality of food that is actually produced by the government and corporations. This could function as more of a Q&A session, during which the students will give responses that are closely related to their experience and understanding of: Where food comes from, Nutrition, and

Food Waste. These experiences and understandings should be connected to the overarching notion that they should care, and now they have the tools—both at a personal and community level—to begin addressing the various issues raised in class.

Objectives:

- Generate thoughtful discussions connecting the material presented throughout the course.

Questions for students:

- How have your views about food changed over these two weeks?
- What does food do for you?
- Is health important to you?
- Is the environment important to you?
- What are some problems that you notice about our current food system?
- What can you do to address these problems?

Possible Activities:

- Complete post-course survey. Success, at this point, can be regarded as the students' growth or ability to answer the questions on this survey. However, this survey is by no means a replacement of the success the instructor personally sees in receptivity of the students throughout the Project Term.
- View Power Point to generate discussions
- Watch videos to generate discussions.

Media Sources:

- Robert Lustig “Sugar Hiding in Plain Sight”: <http://ed.ted.com/lessons/sugar-hiding-in-plain-sight-robert-lustig>
- Nicole Avena “How sugar affects the brain”: <http://ed.ted.com/lessons/how-sugar-affects-the-brain-nicole-avena>
- Birke Baehr “What’s wrong with our food system”: <http://ed.ted.com/lessons/what-s-wrong-with-our-food-system-birke-baehr>

Day 9: Reflection

Overview:

This day will be primarily devoted to synthesizing the themes and answering any lingering questions. Further, this day can be used to explore topics that came up during class discussion, but didn’t wholly fit in with the schedule for the day. Emphasis should be placed on generating ideas about what students can do now that they have completed “The Hungry Games.” Lastly, this time can be used to ensure the students are prepared to present their final projects.

Objectives:

- Synthesize the contents of the course.
- Develop personal and community goals to guide students upon completing “The Hungry Games.”
- Identify what students will need to do to prepare for their final project presentations.

Questions for students:

- What can you do now to address any of the issues brought up in class?
- How do these issues affect your life?
- What did you learn that you didn't know before?
- Is there anything you didn't learn that you would like to explore?
- What can you personally do to be a better food citizen?
- Who are some people you can work with to be a better food citizen?

Possible Activities:

- Create a collage illustrating students' food goals.
- Play a game incorporating themes and question from the class (i.e. Thumball Icebreakers game, Improv, etc.)

Media Sources:

- Improvencyclopedia.org/games/index.html
- Thumball.publishpath.com

Appendix E

Figure 1.6

1. During the PAST 7 Days, how many times did you eat fruit? (Do not count fruit juices)
 - I did not eat fruit during the past 7 days
 - 1-3 times during the past 7 days
 - 4-6 times during the past 7 days
 - 1-2 times per day during the past 7 days
 - 3 or more times per day during the last 7 days

2. During the PAST 7 Days, how many times did you eat a green salad?
 - I did not eat a green salad during the past 7 days
 - 1-3 times during the past 7 days
 - 4-6 times during the past 7 days
 - 1-2 times per day during the past 7 days
 - 3 or more times per day during the last 7 days

3. During the PAST 7 Days, how many times did you eat other vegetables? (Do not count green salad.)
 - I did not eat other vegetables during the past 7 days
 - 1-3 times during the past 7 days
 - 4-6 times during the past 7 days
 - 1-2 times per day during the past 7 days
 - 3 or more times per day during the last 7 days

4. During the PAST 7 Days, how many times did you eat breakfast in the morning?
 - I did not eat breakfast in the morning in the past 7 days
 - 1 day
 - 2 days
 - 3-4 days
 - 5 or more days

5. During the PAST 7 Days, how many times did you drink a can, bottle, or glass of soda or pop, such as Coke, Pepsi, Sprite, or Dr. Pepper (DO NOT COUNT DIET soda or pop).
 - I did not drink soda or pop during the past 7 days
 - 1-3 times during the past 7 days
 - 4-6 times during the past 7 days
 - 1-2 times per day
 - 3 or more times per day

6. During the PAST MONTH, how often did you eat at fast food places?
 - I never eat at fast food places
 - 1-3 times during the past month
 - 2 times a week or less
 - 3-5 times a week
 - I eat everyday at fast food places

7. Do you pay attention to making healthy food choices when you eat?
 - I never pay attention to making healthy food choices
 - I sometimes pay attention

- I frequently pay attention
- I always pay attention

8. During the PAST 7 DAYS, how many days were you physically active for AT LEAST 60 MINUTES per day? (Add up all the time you spend in any kind of physical activity that increases your heart rate and makes you breathe hard some of the time.)

- 0 days
- 1 day
- 2-3 days
- 4-5 days
- 6 or more days

9. On an AVERAGE SCHOOL DAY, how many hours do you watch TV?

- I do not watch TV on an average school day
- Less than 1 hour per day
- 1 hour per day
- 2-3 hours per day
- 4 or more hours per day

10. On an AVERAGE SCHOOL DAY, how many hours do you play video or computer games or use a computer/tablet for something that is not schoolwork? (Include activities such as Ninetendo, DS, Play Station, Xbox, Facebook, Twitter, computer games, and the internet.)

- Less than 1 hour per day
- 1 hour per day
- 2-3 hours per day
- 4 or more hours per day

11. How do YOU describe YOUR weight?

- Very underweight
- Slightly Underweight
- About the right weight
- Slightly overweight
- Very overweight

12. How would you describe your health?

- Poor
- Fair
- Good
- Very Good
- Excellent

13. Is physical activity enjoyable for you?

- Never
- Sometimes
- Usually
- Always

14. How old are you?

- 10 years old or younger
- 11-12 years old
- 13-14 years old

14. What grade are you in?

- Sixth
- Seventh
- Eighth

15. What is your gender?

- Male
- Female

16. What do you consider to be your main racial or ethnic heritage?

- Hispanic
- Black or African American
- White
- Asian
- American Indian/Alaska Native
- Native Hawaii/Other Pacific Islander