



EDUC267G: Integrating the Garden into the Elementary Curriculum
 Pre-fall-spring 2019-2020
 1 unit

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Course Description

This mini-course uses the garden and kitchen environments to provide teacher candidates with real-world contexts in which to explore some of the key issues that children face in health, nutrition, and sustainability. Sessions occur once a quarter and center on a particular theme and subject matter. Teacher candidates will gain an understanding of how to integrate the various themes with content areas and standards. They will also gain an appreciation for the importance of addressing children's health needs in an era when the country is facing increased obesity and other health problems in young children by learning the skills needed to support a garden project and cook the food grown. Teacher candidates will leave the course with ideas and models on how to continue this type of work at their own school sites. The course, which primarily takes place in the garden, serves as a metaphor for teacher candidates' growth over the course of the year as they learn to become educators.

Sessions at a glance

Session/Date/Time	Theme/Topics	Subject Matter Focus
Session 1 - Summer SEPT 6 9:30am-12:30pm	Planting the Seeds of Change Intro to benefits of garden programs Children's nutrition Importance of fruits and vegetables Location: O'Donahue Family Farm	Mathematics
Session 2 - Fall TBD: OCTOBER 11 or 25 9:30am-12:30pm	Living History Gardening with heritage seeds Ohlone Indians Location: Hidden Villa, Los Altos	Social Studies
Session 3 - WINTER TBD: FEBRUARY 22 9:30am-12:30pm	Gardening in a container, cooking in a pot Medicinal herbs Health Location: Ohlone School Garden, Palo Alto	Science/Health
Session 4 - SPRING TBD 9:30am-12:30pm	School gardens Gardening with heritage seeds Planning for kids in the garden Location: TBD	Integrated curriculum

Session 5 – CELEBRATION! JUNE 5 3:30-5:30 pm	Bring it Back Home Tour of Stanford Farm Sharing of school site visits Lunch at the garden Location: O'Donahue Family Farm, Stanford	Sharing what we have learned about school gardens
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Course Expectations

This is a course designed to help you learn both practical skills in planting, gardening, and cooking, along with teaching skills in integrating content standards with real-life contexts. As such, attendance of the five class sessions is expected. Teacher candidates should be prepared to participate in the various rotations that will help with acquisition of this knowledge. If you must miss a class for any reason, please notify the lead instructor prior to the class via email.

Final Assignment - due date: JUNE 5

Teacher candidates will complete a final lesson plan or unit (1-3 lessons) utilizing knowledge gained from the three garden sessions. Teacher candidates have the option to teach the lesson or unit during their independent student teaching week. Teacher candidates will identify a subject area or areas on which to focus, choose standards to address in a lesson or unit, identify materials needed, outline the lesson, and select an assessment.

Session Details

Session 1: Planting the Seeds of Change

Location: O'Donahue Family Stanford Educational Farm, 175 Electioneer Rd

In this session, we will spend time learning about the workings of the Stanford Farm and observing the garden in the summer season. We will also investigate the ways that mathematics might be integrated with the garden. We will be introduced to Jesse Cool's 7 ingredients/1 pot/no recipe method of cooking.

Stations: Rosemary Salt, Cooking, Working in the garden, Curricular resources

Standards Focus: CA Common Core Mathematics Practices:

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

Kinder: KMDA1 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Grade 2: 2MDA2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

Grade 3: 3NFA3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

Suggested Reading(s) & Resource(s):

How to Grow More Vegetables: Than You Ever Thought Possible on Less Land Than You Can Imagine by John Jeavons

Session 2: Living History

Location: Hidden Villa, Los Altos

In this session, we will observe the changes that have occurred in the garden from summer to autumn. We will learn about the old ways of gardening, preserving, and preparing for the winter. We will learn about the Ohlone Indians and the ways that they used heritage seeds in their daily lives through integration of the Social Science standards.

Stations: Ohlone people, field trips at Hidden Villa/Curriculum, cooking, animals at the farm

Standards Focus: CA Social Science Standards (from Framework 2016):

Grade 2: How do people move? How can we best describe California?

Grade 3: Who were the first people in my community? Discuss the major nations of California Indians, including their geographic distribution, economic activities, legends and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources

Grade 4: Why did different groups of immigrants decide to move to California? How were the California Indians affected by colonization and the mission system?

Suggested Reading(s) & Resource(s):

Renewing America's Food Traditions: Saving and Savoring the Continent's Most Endangered Foods by Gary Nabhan

Session 3: Gardening in a Container

Location: Ohlone School Garden, Palo Alto Unified School District

This session will be used to facilitate understanding of the way the seasons impact the garden and the structures used for gardening. Teacher candidates will gain practical skills in learning how to use containers in the winter. We will also explore issues of health and the role of medicinal herbs in promoting health. We will focus on a few easy staples students can create in their classrooms and we will explore sheep in the garden.

Stations: Sheep to Shawl, Garden in a pot, Cooking, Curriculum integration

Standards Focus: NGSS Standards (a sample of applicable standards)

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow and meet their needs.

2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.

2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

4-LS1-2 Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

4-ESS2-1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.

Suggested Reading(s) & Resource(s):

"A School Garden in Containers" by Drew Harwell

Session 4: School garden projects

Location: TBD

This session will be used to explore how a school integrates their curriculum into a large working school garden. Teacher candidates will have an opportunity to work in the garden, plant seeds and practice the one pot method of cooking.

Stations: Cooking, Working in the Garden, Planting Heritage Seeds, Curriculum and School integration

Standards focus: Integrated Curriculum

Suggested readings and resources:

Session 5: Bringing It Back Home

Location: O'Donahue Family Stanford Educational Farm, 175 Electioneer Rd

Prior to this last session, we will visit several Bay Area school garden projects. We will learn about the effect that resources have on starting and sustaining gardens at your own school sites. In observing the changes in the garden due to spring, we will also revisit the theme of sustainability. In this session we will share what we learned about the local school gardens. We will also be sharing the lesson plans you created for your final project.

Gardens to visit: TBD

Activities: Farm tour, lesson plan presentations, catered lunch

Standards Focus: Integrated Curriculum

Suggested Reading(s) & Resource(s):

Hungry Planet: What the World Eats by Peter Menzel & Faith D'Aluisio

HONOR CODE:

Students are expected to adhere to Stanford's honor code. According to the Office of Judicial Affairs (OJA) website, "For purposes of the Stanford University Honor Code, plagiarism is defined as the use, without giving reasonable and appropriate credit to or acknowledging the author or source, of another person's original work, whether such work is made up of code, formulas, ideas, language, research, strategies, writing or other form(s)."

For further information, please consult the OJA website:

<http://www.stanford.edu/dept/vpsa/judicialaffairs/students/plagiarism.sources.html>

STUDENTS WITH DOCUMENTED DISABILITIES:

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL: <http://studentaffairs.stanford.edu/oae>).