

Lesson #2 Working the Dirt

Overview:

Students will learn how to design a garden and begin to prepare it for planting. They will gain and understanding of the water cycle and how it is important to the survival of their food.

Objectives:

This lesson is designed for students to learn the skill of preparing a garden, planting food, and maintaining it once it is planted.

Key Concepts: Garden design, food cultivation, water cycle, chemical identification, composting
--

Subjects: Chemistry, Biology, Ecology, Geography, Botany, Technical Education, etc.
--

Duration: 4 class periods (160 minutes)
--

Setting: Classroom and Cove River
--

Season: Spring-Summer

Interdisciplinary Connections



Produced by the Graduate Students in
Environmental Education EVE 546 Spring 2009



For more information please contact:
Scott M. Graves, 203-392-6604, gravess1@southernct.edu
| Southern Connecticut State University |
| Environmental Studies & Science Education | Jennings Hall |
| School of Arts & Sciences |
| 501 Crescent Street New Haven, CT 06515 |

Introduction (background):

Native Americans and early European settlers did not have the means to turn on a faucet and water their vegetables. They had to learn about seasonal changes, water quality, and efficient usage of irrigation.

Materials:

Test kits, sink float test, salinity tests, water jugs, pre dug garden plot, hoes, shovels, gloves,

Engagement-Opening or Essential Question:

Engage:

Ask students to look at the east and western river of Cove River site. Can they identify any differences? Vegetation differences? Clarity? Speed?

What do vegetables need to successfully grow? Will they grow if there is salt in the water? Ask the students where they would place a garden on the site?

Can anyone spot where the old homestead and gardens were?

Exploration:

Explain:

Explain cultivation. Explain planting timeline. When do we start planting our gardens outside? Explain frost.

How do we start our plants (inside classroom lesson-each kid get a small paper cup, soil, and seed and grows "their" plant for the cove river garden.)

Plants need sunlight for photosynthesis. This helps give the earth oxygen (which we like!). Explain how to begin composting and why it is useful. What is it (naturally occurs in nature everyday, leaves, dead bugs, animals, plants, etc)?

How do we compost for our cove river garden? Why are synthetic pesticides, fertilizers, and herbicides not the best way to garden?

Where we would be getting water from to sustain cove river garden. Explain how on the western side of the site fresh water makes it way to the ocean and on the west the cove river is larger and has brackish water (explain about tides rising twice daily and pushing up the river to mix with fresh water. Mixing of fresh and salt equals brackish)

Explain how to use water quality test kits.

Elaborate:

Separate class into groups. Hand out the water test kits and show them where they will take their samples from.

Sample for salinity and water clarity.

Have students log where the best place to gather water for the garden will be.

Identify where the garden will go (site should be pre dug)

Have students design the garden into sections for separate vegetables.

Have students refer to their research to find out how spaced their seedlings should be.

Supervise the planting of the class seedlings.

Build and area for your compost pile.

Evaluate:

Students will be evaluated based upon their commitment to growing and harvesting their vegetable, their journal recordings, and their vegetable research. A test to complete the lesson should be administered to evaluate basic understanding of historical farming techniques, current techniques, early types of food harvested, and the plant cycle.