



NOTES

Food for America - Demonstration Plan

Unit: Agricultural Technology

Demonstration: Hydroponics (20-30 minutes)

Objective(s):

1. Students will be exposed to new technology in agriculture, specifically hydroponics.

Materials, Supplies, Equipment, References, and Other Resources:

- Seeds (lettuce, tomato, etc.)
- Oasis root cubes
- 5-gallon bucket (dark to prevent algae growth) with lid
- Plastic planter cones
- 5-gallon solution:
- 2 rounded tsp water soluble hydroponic fertilizer 8-15-36
- 1 rounded tsp Epsom Salt (magnesium sulfate)
- 2 rounded tsp calcium nitrate
- Measuring spoon
- Stirring spoon
- Duct tape

Introduction:

Connection to Students – Take a moment and think about what you eat every day. What foods did you come up with? On the board or a sheet of poster paper, capture all of the items students share. What a list! *Pass out small paper cups to each student and fill with water.* Look at that huge list. Take a drink of water. What if you could get all of your nutrients to grow big and strong in this simple glass of water? That is exactly what farmers are doing today, not for humans, but for plants.

Motivation – New technology in agriculture is exciting, amazing, unbelievable, and will change the way we produce food, fiber and natural resources in the future.

Overview – Today we are going to get our hands on some new technology—hydroponics.

***NOTES – There are many resources out there to provide supplies and information. *General Hydroponics* will donate hydroponics products to schools with teachers who use hydroponics in their classrooms or who are considering doing so. Visit www.genhydro.com for more information. This hydroponics set-up is based on information provided by the Hawaii Department of Education www.k12.hi.us.



Procedures (How to Perform the Step)

On Lesson Day

Plans for Learners/Participants to Practice the Skill/Task:

- ### ****Adaptations for Upper Elementary**

- If time allows, students can create their own hydroponics set-up. Bring in seedlings in root cubes and give each student a plastic jug or container. Have students add nutrients and create their own mini-hydroponics unit.

Summary of Key Points:

10:5 - 8