

Hydroponic Experiments using Soda Bottles

Standard(s): 3.1, 3.2, 3.3, 3.4, 4.6

Objective(s):

1. Students will construct hydroponics experiments in soda bottles.
2. Students will learn that you do not need soil and that plants need food and oxygen.
3. Students will make observations, design experiments, record and analyze data, make models, and infer their findings.

Procedure:

1. Lecture discussion:
 - a. Briefly discuss hydroponics
 - b. Discuss hydroponics experiments and basic setup
2. Use the textbook, internet, or various other sources to find information on the following questions relating to the hydroponics experiment:
 - a. Different growing mediums (ex. Lego blocks, shredded fabric, etc.)
 - b. Different nutrient solutions (ex. regular solution, Coca-Cola, milk, etc.)
 - c. Different environments (ex. no light, light from a fluorescent light, etc.)

Find the definitions to the following hydroponics vocabulary:

- a. hydroponics
 - b. growing medium
 - c. nutrient solution
 - d. pH
3. After the textbook, internet, or various other sources research is completed we will have a class discussion on what we have found

Follow-up Activities:

1. Students will compare and contrast their aquaponic and hydroponics experiments.