South Carolina 4-H Volunteers' Newsletter January 2019 • Volume 4, Issue 2 (suppl. 1)

WE CU VOLUNTEER

Volunteer Opportunity!

For the South Carolina 4-H Engineering Challenge

SC State Fairgrounds, Columbia, SC

March 39, 2019 (9AM-3PM)

We are seeking teens and adults to help us with the 2019 South Carolina 4-H Engineering Challenge!

No experience necessary!!!

Please let us know that you are willing and able to help! If you fill out the online form, please plan to attend the event on Saturday, March 30th at the SC State Fairgrounds (1200 Rosewood Dr., Columbia, SC). Someone will be back in touch with you leading up to the event with more information. You will be provided with a T-shirt and lunch for volunteering.

We have opportunities to assist with each of the 6 challenges this year: Bridge-building, Lego Robotics, Mystery, Rockets, Coding, and Photography. There is also help needed with registration, STEAM Fair, and lunch!

In addition, if you know of any individuals, companies, or organizations interested in being a part of our STEAM Fair, please share our event with them! For questions, please contact Ashley Burns at taberp@clemson.edu or 404-580-7984. THANK YOU!!!

"Learn by Doing!"
4-H Slogan

Upcoming Statewide Programs:

Presentations Contests
February 9 (Jr) & March 2 (Sr), 2019
Opportunity for youth to showcase their knowledge (for ages 9-18 years)
Register by Jan. 25th

Junior Weekend
February 8-10, 2019
Use promocode HOLIDAY by Jan. 1 to get $15 off! (for ages 9-13 years)
Register by Jan. 25th

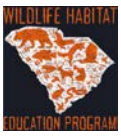
Honey Bee Project
March to August 2019
Independent-study project to learn about beekeeping (for ages 5-18 years)
Register by Feb. 1st

Senior Teen Weekend
March 1-3, 2019
Use promocode HOLIDAY by Jan. 1 to get $15 off! (for ages 14-18 years)
Register by Feb. 15th

Engineering Challenge
March 30, 2019
Six different STEM challenges to choose from!!! (for ages 5-18 years)
Register by Mar. 1st

Legislative Day
March 12, 2019
Show your appreciation for your state's legislators! (for ages 9-18 years)
Contact your local 4-H Agent

Pinckney 4-H Leadership Conference
June 16-22 & July 21-27, 2019
Premier leadership conference at Clemson (for rising HS soph. & jr.)
Apply by Mar. 15th



WHEP State Contest
April 27, 2019
Develop skills and compete for prizes related to wildlife (for ages 9-18 years)
Register by Apr. 12th

CLEMSON COOPERATIVE EXTENSION

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Monthly 4-H Club Activity Idea

By Serena Woodard, 2018 Youth in Action Award Winner

Bean in a Bottle

Objective: To learn about the plant's life cycle and discover what plants need to survive.

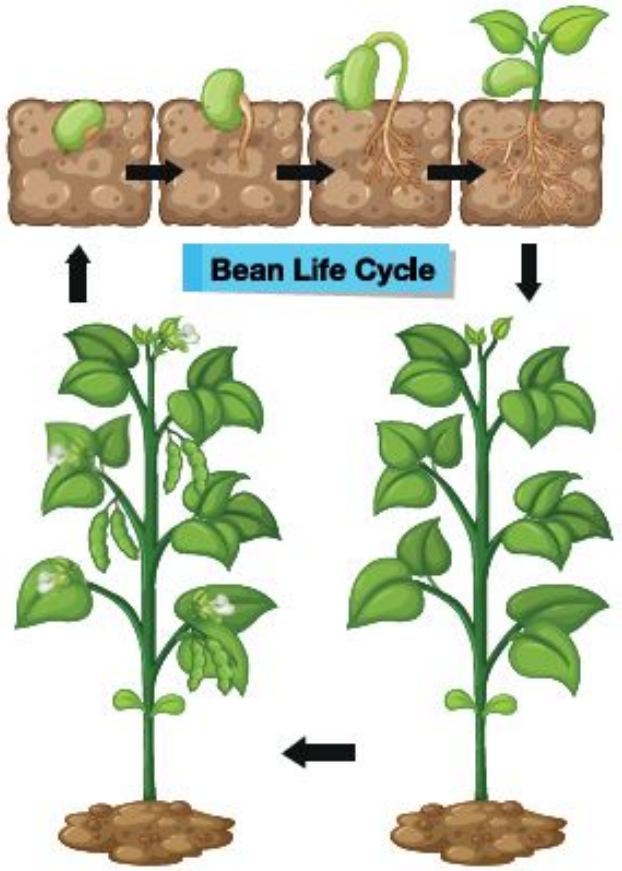
Age Range: Targeted to grades 3-5

Hands-on Activity: use inexpensive materials to implement a variety of simple challenges

Life Skills: HEAD – planning/organizing, decision making, learning to learn;
HEART – communication, sharing;
HANDS – self-motivation;
HEALTH – character, self-discipline.

Introduction

In the Bean in a Bottle activity, the string wicks water up into the soil to keep the plant moist. Water is made of cohesive and adhesive properties, which means that it "sticks" to itself and other special materials. This allows the water to be absorbed into the string; once the string has been completely soaked it will result in water droplets being left in the soil, where it can then be absorbed by the plant.



The activity teaches the basics of plant life cycles, but it also teaches about hydroponics! Hydroponics is the process of growing plants in perlite, gravel or liquid, with added nutrients but without soil. There are lots of different hydroponic systems, but one of the simplest kinds uses water wicking, just like this activity.

STEM is used on every farm and ranch, from tractor GPS systems to hydroponic systems. In Australia, it is estimated that 20% of the country's vegetable production came from hydroponics in 2017!

Materials

1 empty plastic bottle
scissors
string
water
garden soil
bean seeds

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Instructions

1. Cut the water bottle in half, horizontally.
2. Remove the bottle cap and assist kids with cutting a small hole in the bottle cap.
3. Cut a string that is about five inches long.
4. Poke the string through the hole in the cap and tie a knot on the inside of the cap. Screw the cap back onto the top section of the bottle.
5. Now, fill ¾ of the bottom section of the bottle with water.
6. Take the top half of the bottle and place it upside down, inside the bottom half of the bottle. The cap should not be touching the water.
7. Fill the top half of the bottle with soil. Press a bean seed into the soil and cover with about ½ inch of soil.
8. Place the Bean in a Bottle in a sunny location either inside or outside, and watch your bean grow! Don't forget to change out the water when it begins to color.

Reflective Questions

- How does agriculture relate to science and why is it important that these fields work together?
- What did you learn about indoor gardening?
- How does the water get to your bean?
- What are other ways to be active in agriscience in your home? In the city? Brainstorm ideas.

Conclusion

Science is fun and a great way build confidence of youth in their abilities. The activity teaches the basics of plant life cycles, but it also teaches about one of the simplest kinds of hydroponics that uses water wicking, just like this activity.

Additional Resources:

Bean in a Bottle. 2018. National 4-H Council. https://4-h.org/parents/stem-agriculture/youth-stem-activities/bean-in-a-bottle/

Bean in a Bottle Lab Notebook. 2018. National 4-H Council. https://4-h.org/wp-content/uploads/2018/09/4H-STEM-Lab-Bean-in-a-Bottle.pdf

Home and Garden Information Center. Clemson Cooperative Extension. https://hgic.clemson.edu