South Carolina 4-H Volunteers' Newsletter April 2020 • Volume 5, Issue 3, Suppl. 1

WE CU VOLUNTEER

National Volunteers Month

Thank you to all of our amazing South Carolina 4-H volunteers that #InspireKidsToDo every day!!! Over 3,000 adult volunteers in SC give youth more opportunities to grow and lead in life and career—through hands-on learning and doing!

Even in this difficult time, youth and adults are working together to find great ways to benefit their local communities. Instead of giving $4 to 4-H on April 4th this year, please #Give4for4H by giving back locally!!! This goes hand-in-hand with our #TrueLeaders in service campaign.

REPORT SERVICE

Here is a list of potential ways to serve:

1. Give to a local food pantry
2. Provide groceries for a needy family or homebound senior(s)
3. Take a homebound neighbor's dog for a walk
4. Foster an animal from a local rescue, humane society, etc.
5. Give blood
6. Share knowledge by teaching others virtually (video, photo, tutorial)
7. Share musical talents by performing for others (virtually or from a safe distance)
8. Give to a charity directly benefiting people affected by coronavirus
9. Write a note to someone letting them know you care
10. Plant a garden for someone
11. Share a 4-H project's products (i.e., eggs, vegetables, honey, etc.) with others in need
12. Beautify a neighborhood (pull weeds, plant a pollinator garden, pick up litter, etc.)

Upcoming Statewide Programs:

4-H Pinckney Leadership Camp
Summer of 2020
Middle-school youth are invited to apply for camp.
Registration still open!!!

4-H Horse Judging Contest
Sat, April 25, 2020
Teams compete in a horse judging contest online (ages 5-18)
Register by April 3

4-H Small Garden Project
Spring/Summer of 2020
Independent-study project for youth to participate in gardening (ages 5-18)
Register by April 10

True Leaders in Service
Sat, April 25, 2020
Putting service into action throughout April all across SC (all ages)
Ongoing

4-H @ Home
Ongoing
Register and receive weekday emails and activities (ages 5-18)
Ongoing

How do you 4-H?!
Ongoing
Showcase your 4-H skills in social media videos #howdoyou4h (all ages)
Ongoing

4-H Photography Contest
Ongoing (announced June 1)
Showcase your point-of-view in the photography challenge (ages 5-18)
Submit entries by May 18

CLEMSON COOPERATIVE EXTENSION

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Monthly 4-H Club Activity Idea

By T. Ashley Burns, Ph.D.

Pom-Pom Drop

Objective: To use the Engineering Design Process and explore the basic principles of physics

Age Range: All ages

Hands-on Activity: Create an obstacle course for a small ball to travel down using basic household materials.

Life Skills: HEAD – learning to learn, problem solving, decision making;
HANDS – self-motivation;
HEALTH – self-discipline.

Introduction

The Engineering Design Process is a continuous process that people use to optimize the solutions to problems. The process includes three basic steps:

A. **Defining engineering problems** involves stating the problem to be solved as clearly as possible in terms of criteria for success and constraints or limits,

B. **Designing solutions** to engineering problems begins with generating a number of possible solutions, then evaluating those solutions to see which ones best meet the criteria and overcome the constraints,

C. **Optimizing the design solution** involves a process in which solutions are systemically tested and refined, and the final design is improved by trading off less important features for those that are more important (Figure 1. *Incredible Wearables*, 2016 NYSD Facilitators Guide).

Practically any construction challenge can use these steps. In this month's activity, youth will be solving the problem of getting a pom-pom (or other small ball) from a starting point to a designated ending point. They should test their design along the way and make modifications as needed. Additional factors can be added to increase the complexity of the design challenge based on resources, age, and skill level.

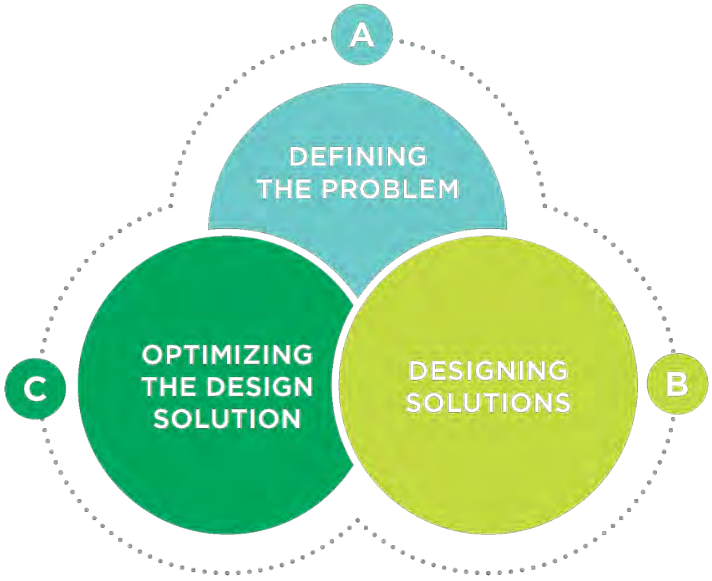

Figure 1. The Engineering Design Process. *Image credit: National 4-H Council*

Materials

- Pom-pom (or other small ball)
- Cardboard tubes (from paper towels, toilet paper, or wrapping paper) or tubes made from rolled up paper
- Painter's tape (ideal for protecting walls)
- Scissors
- Container to catch the pom-pom
- Various other materials as desired

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Activity Instructions

1. Find a space to design the pom-pom drop: a wall (indoors or outside), tables or chairs, trees or other outdoor structures, etc.
2. Create a plan to get the pom-pom from a high elevation to a container on the ground using cardboard tubes (or other materials) to guide it.
3. Assemble the design and test it as you go.
4. Modify the design as necessary.
5. Optional: Add challenges to increase the difficulty level, such as a change of direction, a vertical drop/catch, a section that comes off the wall/structure, a change in speed (fast/slow), different ball types/sizes, etc.

Reflective Questions

1. What do you think about this activity? Name something that was fun about this activity.
2. Share a time when you had to modify your design.
3. About how many times did you test before you felt comfortable with your design?

Conclusion

Creating environments for kids to try, fail, and try again is important to their development. Resiliency and critical thinking skills are both enhanced through the use of engineering design challenges. Being flexible and adaptable with materials and objectives also enhances creativity and affinity for STEM activities. Have fun!!!

Figure 2. Basic supplies needed for the pom-pom drop (top), testing with each additional step (bottom left), and the finished design (bottom right).

Additional Resources:

Florida Department of Education. 2018. Lesson: Pom Pom Drop (Physics). http://elcosceola.org/wp-content/uploads/2018/02/POMPOM-DROP-LessonPlan-for-ELC-Conference.pdf

Lemon Lime Adventures. DIY Recycled Marble Run. https://lemonlimeadventures.com/recycled-marble-run/

Sheakoski, M. 2015. Explore Gravity with a Pom Pom Drop. Sylvan Learning Center. http://www.sylvanlearning.com/blog/index.php/explore_gravity_with_a_pom_pom_drop/