



NJSBA and Rutgers Summer Design Challenge Warm-Ups:

Quick Problem Solving Activity #4

QPSA #4: What to do with a Sock?



Objectives: A sock is a technology that you probably don't think about very much, especially when they do their job well. Usually we use them to keep our feet insulated from the cold air, but they also protect our skin from getting blisters where our feet rub against the inside of our shoes. Socks can also be used to make our feet more fashionable.

Come to think of it, socks solve a lot of problems, and not just for our feet! Have you ever repurposed an old sock to do something else? Maybe you used it as a rag to wash your bike, or you have seen one stretched over the head of a golf-club to keep it from being scratched?

There are probably a lot of uses for a sock that you have never thought of before. Part of being a creative problem solver, is being a divergent thinker. Divergent thinkers are able to come up with new or novel ways to solve problems by using common items in seemingly uncommon ways.

- 1) Test your divergent thinking skills and challenge your creativity.
- 2) Think about the many different properties of a sock and how they could be valuable in other situations, or repurposed to solve problems you might encounter in your daily life this summer.

Supplies (per person):

- Pencil, marker or crayons
- Sheet of paper
- One Sock

Instructions:

1. Take out one of your socks, a sheet of paper, and something to write with
2. Draw your sock and label it with as many notes as you can to point out as many properties of a sock as you can think of (for example: stretchy, soft, absorbent, color, etc.)
3. Use your best divergent thinking skills and see how many ways a sock could be repurposed to solve problems in everyday life...especially over the summer!
4. When making your list, it is OK if you have to modify the sock (such as taking it apart, cutting it with scissors, freezing it, etc.)
5. Avoid overlapping problems: If you think you could use a sock to carry around your loose change, and somewhere else on your list you say you could use it as a pencil case, you can only use one of those ideas on your final list. This is because both answers are repurposing the sock for the same reason - a carrying case.
6. When you think your list is as long as it can be, don't give up! Be persistent and optimistic! If you can come up with 15 ideas, you are doing great! In this activity, it is possible to make a list of 30 or more!

Share your results:

When your family has designed and created solutions to the challenge, we encourage you to share to the STEAM Tank community [Facebook page](#) or submission form located on the NJSBA [STEAM Tank website](#) Or, share directly by using the link below. Parents or guardians for students under 18 must submit their work to the Google form.

https://docs.google.com/forms/d/e/1FAIpQLSfmOPgBHIYYj-L6n9x6MDVu28nVDGyYloNG9QktQ2aaDthWBQ/viewform?usp=pp_url

Join us every Wednesday at 2:00 for a WebEx STEAM Tank Community meeting to discuss challenges and share ideas. <https://njsbaevents.webex.com/meet/jsiehl>