Engineering Design Brief: Making the Most out of your Locker

Challenge Overview

During the first few weeks of 7th grade Anthony struggled to keep up. From juggling all of his class materials, the books and papers he had to bring home for homework, not to mention his personal belongings and equipment for sports practice after school. His locker was not doing the trick. Within the first few weeks of school he had lost his math homework twice and had to get new sneakers because he lost those too!

Anthony thought the problem was that his locker was just too small. If only he could get a second one and then all his problems would be magically solved. Unfortunately, that just wasn't possible. When talking to his friends, he noticed others were having a hard time adjusting to their new lockers as well. Their belongings were just not able to fit well and nothing had its place. Anthony had recently started his Project Lead The Way class at school and learned engineers solve real world problems. So he thought why not try to design a locker storage solution to help him stay organized just as an engineer would!

Engineers often start with a problem and design solutions for their problems. Look around. Everything you use was engineered so that you could use it easily. Take your cell phone for example. Engineers thought long and hard about how to make cell phones easy to use and appealing to consumers.

Challenge specifications:

Create the perfect locker storage organizational system for a middle school student. Your prototype must be able to fit in a locker you might use every day. If you don't have a locker, create a storage solution that you could use at your school to keep your belongings organized. Your design must be able to help the user keep their items neat and accessible throughout the day.

Design Criteria:
1. Has specific design features to hold different types of items such as backpack, books, clothing, water bottle, etc.
2. When items are stored, the locker door can close securely or items stay within the contained space

Possible Materials: cardboard, string, tape, hooks, mesh bags, paper, wood, plastic, drawers, rubber bands, straws

Submission:

For complete entry, please make sure to submit the following items:

1. Submission form
2. 2 Completed Peer Reviews
3. Photos of prototypes (at least 2—initial and final)

Questions to consider while building the prototype:

a) What types of items are typically found in a locker?
b) What size are the items? How are they shaped?
c) How often will you need to access these items? What does this mean about where it should be stored?
d) Can the space be modified depending on what it's being used for at a particular time?

Resources for getting started:

- https://www.pinterest.com/explore/locker-organization/
- https://www.youtube.com/watch?v=M7sBweWAL3Y

Peer Review 1:

How many stars would you give this design overall?

☆ ☆ ☆ ☆ ☆

How did this design help you organize your belongings?

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Would you continue to use a design like this to organize your belongings?

___Yes   ___No

Peer Review 2:

How many stars would you give this design overall?

☆ ☆ ☆ ☆ ☆

How did this design help you organize your belongings?

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Would you continue to use a design like this to organize your belongings?

___Yes   ___No