MAKER CHALLENGE

March/April 2025 ★ Cedar Falls Schools

Zipline Challenge

Please note: Only ONE class will be able to complete this challenge at a time.

Provided materials to get you started:

- Zipline (1.5 meters up off the ground and taped to the floor)
- Legos
- Washers
- String (4 meters long)

This month's challenge is to deliver a package of food/medicine to a vet that's with a hurt animal via zipline. The terrain is too rugged, so the lego zipline is our only hope. Create a carrier out of legos and your teacher will record how much time it takes to get to the bottom of the mountain! We want to be as close to 3 seconds as possible. Teachers take a whole class photo of your classes zipline carriers!

What is a Maker Cycle?
https://www.youtube.com/watch?v=MLQwnjiYTFY&authuser=0

This month's challenge video
https://www.youtube.com/watch?v=eU20fmqZhMA

Imagine Generating ideas!

- ❏ Make a plan for your lego carrier.
- ❏ Decide how many washers you're going to need in your carrier

Plan What's your plan for the zipline and the carrier?

- ❏ What is your carrier going to look like with the Legos?
- ❏ How many washers are you going to use in your carrier?
- ❏ How are you planning to connect your carrier to the zipline?
- ❏ How heavy or light do you think your Lego carrier needs to be in order to make it down in as close to 3 seconds as possible?

Teacher Setup: **Attach one end of the zipline 1.5 meters up the wall or on a whiteboard with duct tape. Stretch the other end to the floor and tape it down or use books to hold it in place.**

Create Build your zipline carrier

- ❏ Reflect along the way! What's working? What's not?

Test & Improve How can you make your zipline carrier look better or function better? How can you get your carrier to be as close to 3 seconds as possible? Teachers- you could record times on the board to see who is the closest!

- ❏ What will give your creation the final touches?

Celebrate! You've made a zipline that works! Congratulations!

- ❏ **Teachers: Take a picture of your students carriers for the Google Drive. The QR Code is posted below**

