

Building From Home: week 2*—REPURPOSE

Name:	Date:	Class period:
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Introduction: REPURPOSE

We are trying to re-do school—what we're all used to is changing. So, last week I told you to look for problems you see around you and try your best to help solve them. And to check MS Teams because I was going to post a one-pager with 5 things on it. (This week I can only fit 3. Sorry.) Here's the first don't-bug-your-family page.

Activity 1: BUILD SOMETHING

1. Challenge: REPURPOSE some trash. Well, clean recyclables I mean. We (collectively, as a society) have A LOT of trash, and the market for selling our recycled stuff is drying up. Your job is to make something out of it. Today: build a strong tower, as tall as possible, that can hold a tennis ball, and withstand mild wind or earthquake conditions. Before you begin, get permission from your adult to make a mess.

2. Suggested materials:

tape, string	timer	tennis ball	ruler or tape measure
20 pieces of paper	6 plastic bottles or cans	6 yogurt cups	4 cereal boxes

3. Requirements: Make the tallest tower you can, at least 3 feet high (the height of a standard kitchen cabinet or bathroom sink), that holds a tennis ball (or something like it) on the top. It must survive 2 minutes of a fan being blown on it or 1 minute of a simulated earthquake (where you jump up and down next to it or sit in a chair and stomp like you do in the bleachers at school).
4. Rebuild it. You won't be happy with your first attempt. This will be OK.
5. Document it. Write about what you built. Draw it, take a picture, take a video, whatever you want. Then brag about it. Post it wherever you want, or just keep it to yourself and feel amazing.
6. Check out the other attachments on this assignment in MS Teams for background and ideas.
7. For a challenge, don't limit your materials. Just. Make. Amazing.

Activity 2: READ SOMETHING (and then summarize it)

1. Find a book—in some way related to problem solving (or, repurposing) or engineering—then read it on your own or to someone else. Then write a summary.
2. Or: read and summarize the article on the back—make sure to include the following in your summary:

Who is the article about	What is the article about	When did it take place
Where is the action happening	Why did this event happen	How was it completed
Problem or challenge in story	Result (success or failure)	Lesson that was learned

Activity 3: SOLVE SOMETHING (brain work)

1. Answer these:

What can be seen once in a minute, twice in a moment, and never in a thousand years?	
Which tire doesn't move when a car turns right?	
I'm not alive but I have 5 fingers. What am I?	

2. Or try this from ed.ted.com. [Link to ted riddle](#)

(* at the top of the page: I call this "week 2" because last week was week 1)

SpaceX puts 60 satellites into orbit despite engine failure

UPDATED: Wed., March 18, 2020

By Marcia Dunn, Associated Press



A Falcon 9 SpaceX rocket with a payload of approximately 60 satellites for SpaceX's Starlink broadband network lifts off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Wednesday, March 18, 2020. (John Raoux / AP)

CAPE CANAVERAL, Fla. – SpaceX launched 60 more of its internet satellites into orbit Wednesday despite an engine failure shortly after liftoff on a recycled rocket flying for a record fifth time.

SpaceX chief executive Elon Musk said one of the nine main engines shut down prematurely during liftoff, a rare occurrence. But the satellites still made it to the proper orbit, increasing the Starlink constellation to about 360.

“Shows value of having 9 engines! Thorough investigation needed before next mission,” Musk tweeted.

It's the same type of rocket – a Falcon 9 – that SpaceX will use to launch NASA astronauts as early as May. Sunday's launch attempt for these latest Starlinks was halted at the last second because of a bad engine reading.

“Last launch aborted due to slightly high power. Possibly, but not obviously, related to today,” Musk said.

This particular first-stage booster won't be flying again. Instead of landing upright on a floating offshore platform, the booster missed and slammed into the Atlantic.

SpaceX had better luck with its recycled nose cone, recovering it from the sea.

This is the sixth batch of Starlinks that SpaceX has launched in under a year. Each compact, flat-panel satellite weighs just 575 pounds.

Musk envisions thousands of Starlinks providing affordable, broadband internet service to virtually every corner of the globe – a concern for astronomers.

Astronomers fear the night will be ruined by constellations of these relatively low-orbiting satellites. SpaceX is experimenting with dark paint and, sometime soon, satellite sunshades, sort of like patio umbrellas.

A Starlink covered with dark paint rocketed into orbit in January. SpaceX officials said Wednesday there was a notable reduction in reflectivity.

The London-based OneWeb, meanwhile, plans to launch another batch of its own internet-service satellites from Kazakhstan on Saturday. This latest batch of 34 satellites will bring OneWeb's higher orbiting constellation to 74.