

STEAM project syllabus:

Each session will have a project which the kids will get to formulate a plan to design, create, and experiment.

BUILD-a-BOAT! (in groups)

Pretend you're stranded on an island with all your friends. Thank goodness you have an emergency bag! With your emergency bag, build a boat to get back home. Who can build a boat that will hold the most pennies (one penny=one friend) to float home.

In each emergency bag: (5 emergency bags)

- Sheet of aluminum foil
- 6 Popsicle sticks
- 2 feet of duct tape
- 2 feet of String
- 4 Plastic Straws
- 1 Sheet of Paper
- 4 Rubber bands
- 4 corks

Given: scissors, tupperware full of water

EX's:



Earthquake! Given small pieces of Pasta and small marshmallows, design a home that will survive a teacher-made earthquake in a tupperware. I'll put the house in a tupperware and shake it. Whose house can survive my earthquake without breaking? If extra time, we do a second competition: who can build the tallest tower?

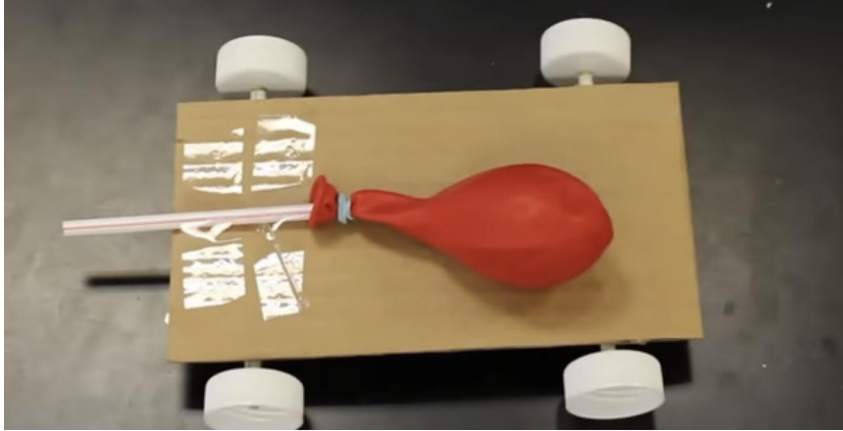


Balloon car: This ones tricky, so it will be in groups! Make your own car that is motored by balloon power. We will measureEach group will receive materials:

- 2 Skewers
- 4 corks
- 4 straws
- 2 balloons
- Tape
- Cardboard
- 2 rubber bands

Communal Materials: tape

EXAMPLE but doesn't have to look like this:



^^These were the most successful workshops we did with Valley View.. But, if you have any concerns about these, I have other ideas:

Alternate Workshops:

EGG DROP:

Design something to encompass and protect an egg which will be dropped from 3-4 feet. Don't let the egg break!

Given Materials:

Shoe box

Fuzzy socks

Tissues, packing materials, fabric

Scissors

Water bottles

Given: Water bottle tops

Model magic

Baking soda

Big tupperware to keep everything in (kids can do explosions one at a time)

Design a roller coaster (groups)

Given:

- Pool noodle
- Scissors
- Duct tape
- Skewers

- Half of a gift wrapping tube
- Markers to decorate

We'll test your coaster with a marble

You can use cabinets or walls or tables to create hills, loops, anything you put your mind to!

EX's:



Additional ideas:

Create a new plant or animal

Exploring coding: SCRATCH! (depends on if they have a chromebook or not) At what age do students get chromebooks?

Make a circuit on paper

Creating static electricity with a balloon rubbing on your hair or sweater