

ME 491

Design Competition:

Lego Rescue

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ME 491 – September 2017

Rescue one of these Lego mini figures



Rescue the Lego mini figure from the top of the tower

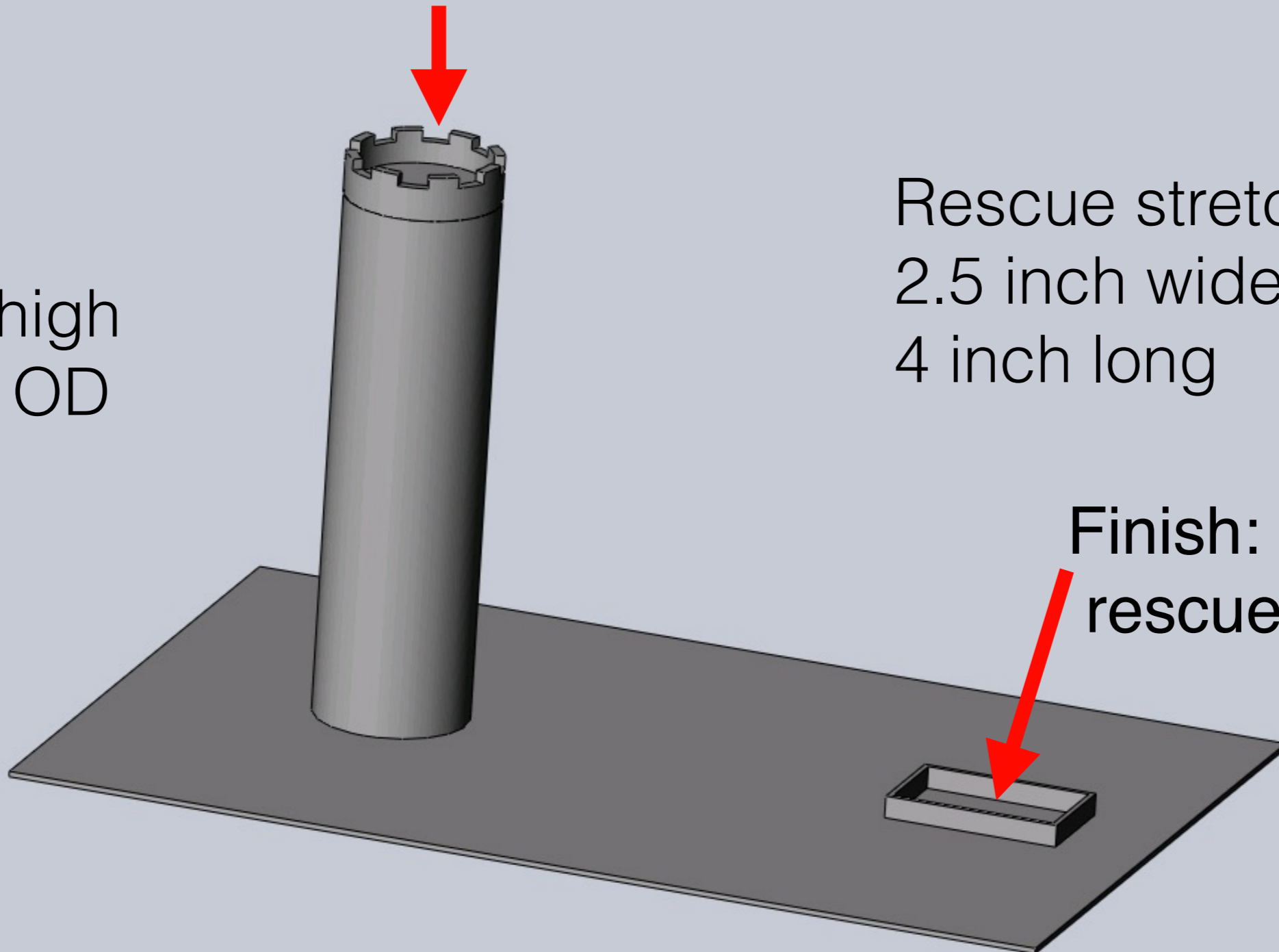
Start: in the tower parapet



Tower is
12 inch high
3.5 inch OD

Rescue stretcher
2.5 inch wide
4 inch long

Finish: in the
rescue stretcher



Alternate Lego mini figures (28)



Some mini figures have protruding gear

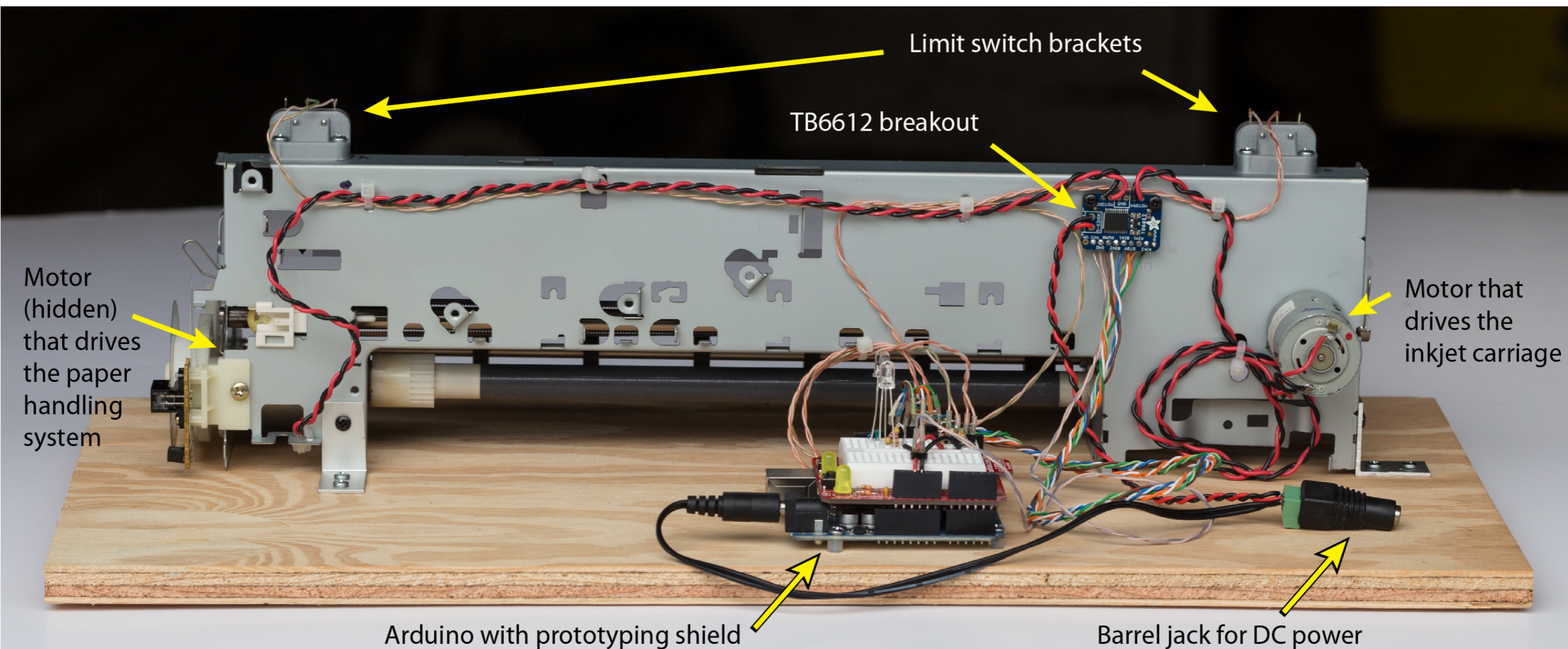


Some mini figures have a strange base



Use parts from a hacked ink-jet printer

1. Free Geek is donating printers
2. Each team will get a printer and a workbench
3. MME will supply a dual-motor DC motor controller



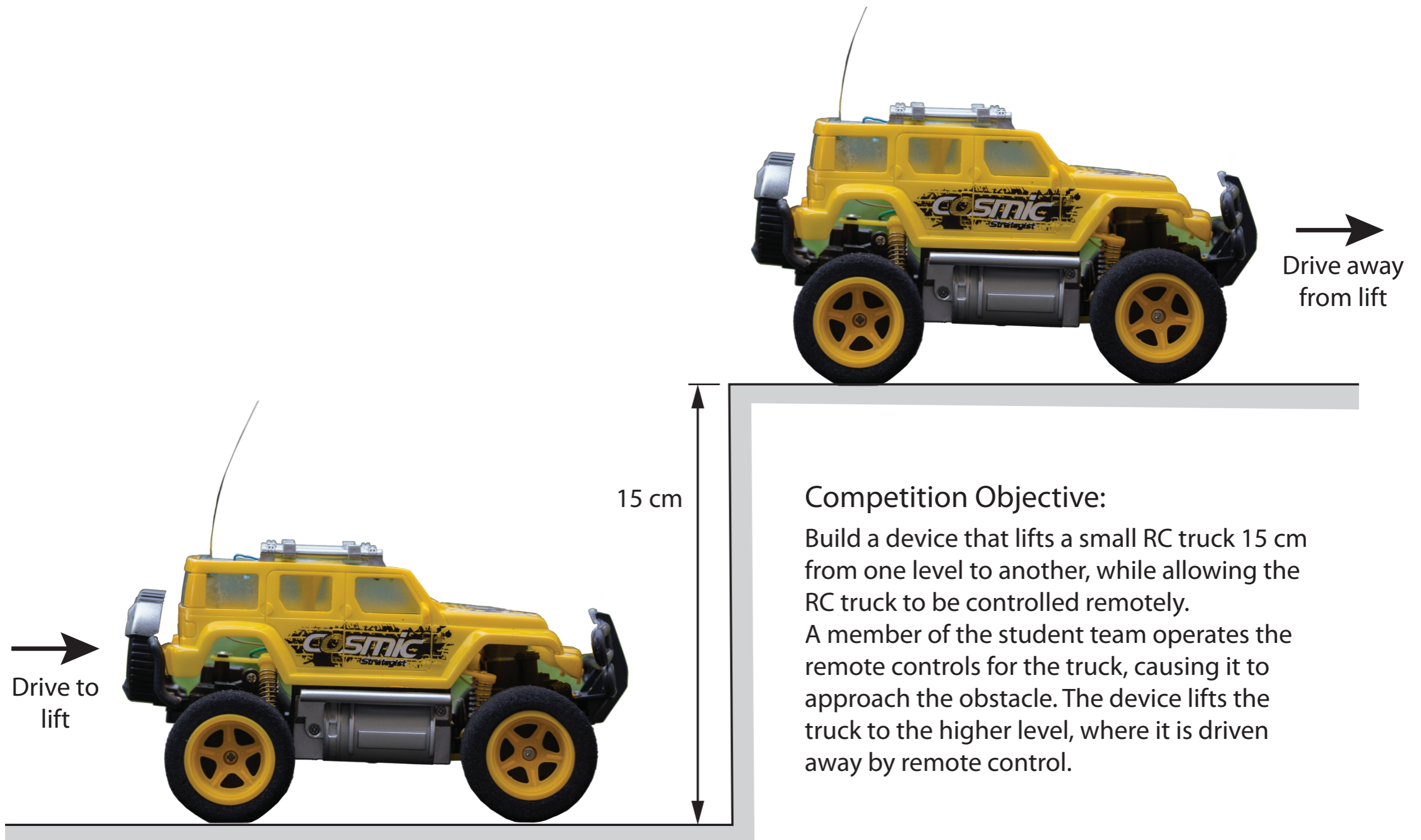
Competition Criteria

1. Time to rescue — shorter is better
2. Total weight of rescue apparatus
3. Lowest cost bill of materials

Competition is on November 28 — the last day of class, and will be held in the EB Atrium

Nominal cash prizes for top 3 teams

Design competition for 2016:



Competition Objective:

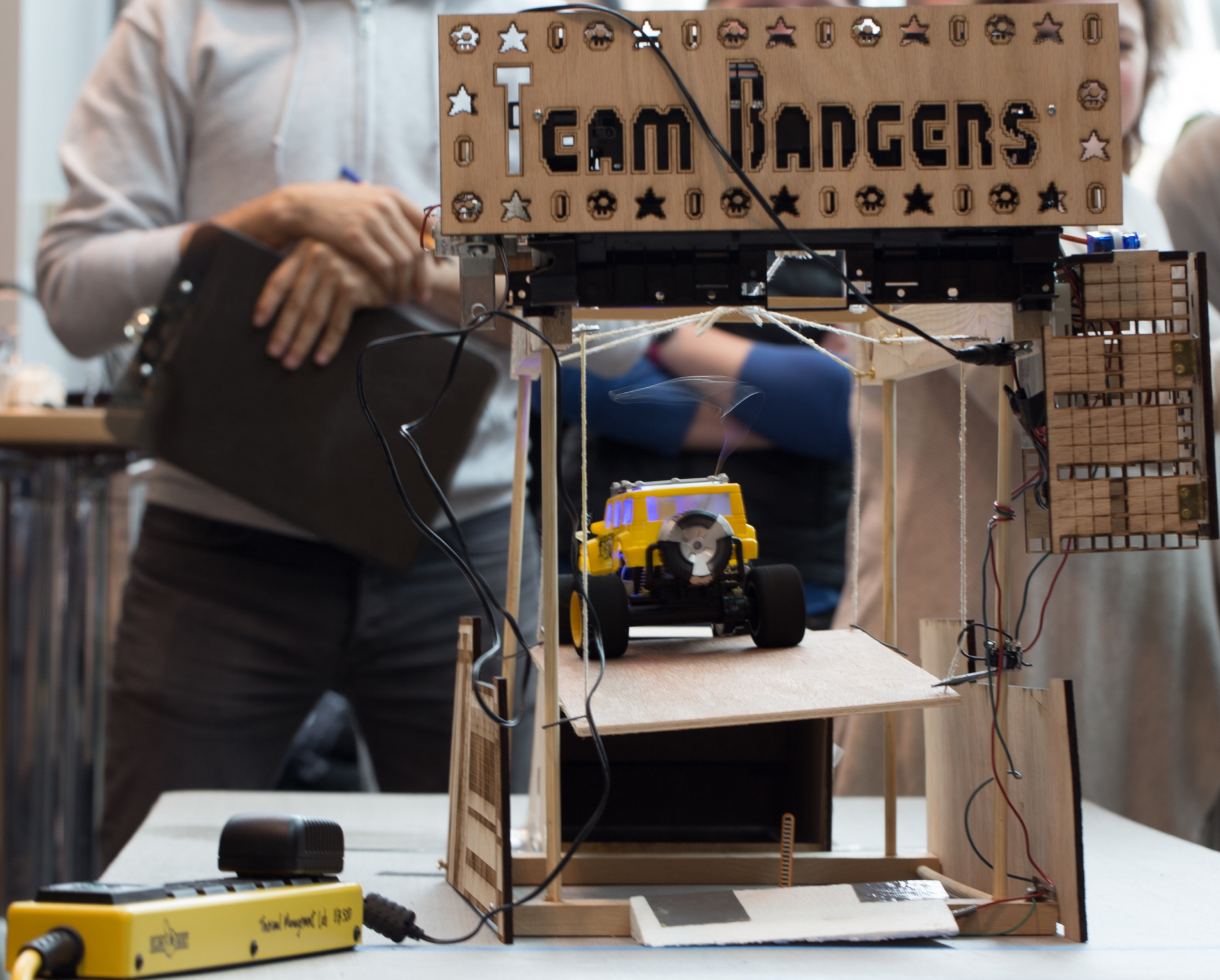
Build a device that lifts a small RC truck 15 cm from one level to another, while allowing the RC truck to be controlled remotely.

A member of the student team operates the remote controls for the truck, causing it to approach the obstacle. The device lifts the truck to the higher level, where it is driven away by remote control.

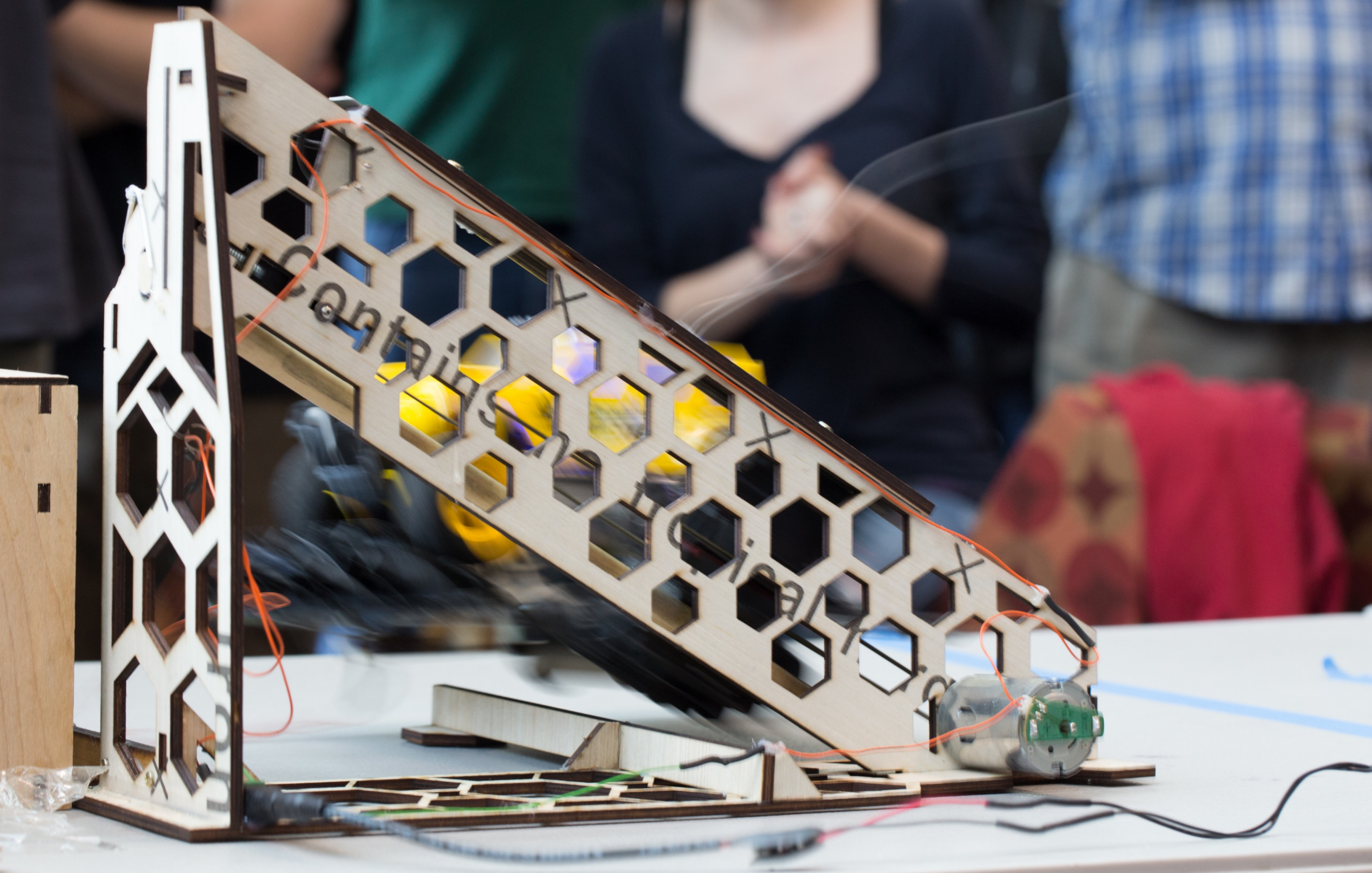
Photos from 2016 Design competition



2016 Design competition



2016 Design competition



2016 Design competition

