80/20® Inc.
The Industrial Erector Set®

ALUMINUM FRAMING SYSTEMS

# TechFest 2019 Competitive Event

**Competition Title:** Engineering-in-a-Box

**Competition Sponsor:** 80/20® Inc. The Industrial Erector Set®

**Competition Summary:** Each student team will design and build a prototype from the same basic instructions & parts provided in a kit. The instructions will provide general "how-to" steps for building using t-slot framing material but not describe required details. The variety of materials included in the kit will allow individual decisions by each team regarding, but not limited to:

- Overall size, shape
- Functionality

Teams will also be provided with basic tools needed to build the prototype, such as fasteners and wrenches etc. The goal of the competition is to construct a prototype that conforms to the requirements of the challenge, demonstrates functionality and creativity while remaining structurally sound.

**Competition Details:** Build kits, tools and a work surface will be will be provided to each team. Each team will design and build (1) prototype in the allotted time of 120 minutes. At the end of the building phase of the competition, each prototype will be evaluated by the judges. Judges will also be watching for how the groups function as a team.

**Start Time:** (TBD)

**Single round**

**Individual Team Size:** 4 students

**Pre-defined Team Roles:** Designers, Builders, as determined by the team and its Head Coach

**Maximum Number of Teams:** (TBD)

**School Points Awarded for Gold, Silver, Bronze:** 5,000, 3,000, 1,000 points, respectively

**Scoring Rubric:** Each team will be evaluated on:

1. Qualifying round, all competitors – how well design best conformed to challenge requirements, design functionality, creativity and stability

**Event Hardware Required:** None

**Event Software Required:** None

**Utilities/Internet Required:** None

**Materials/Supplies Required:** One build kit, details of prototype NOT DISCLOSED TILL TECHFEST!

**Information to be provided to competing teams**: Basic instructions

**Pre-Work Required**: None

**Pre-Work Possible** *(not required)*: None