

Design Challenge: Sumo Hexbugs

Grade Level: K – 20
Time Required: 15 min
Group Size: 1 – 3
Subject Areas: Engineering
MA STE Standards: ETS1.A Define design problems
ETS1.B Develop solutions
ETS1.C Optimize solutions



Google Slides: <https://tinyurl.com/NUSTEMCenter-SumoHexbugs>

Design Challenge

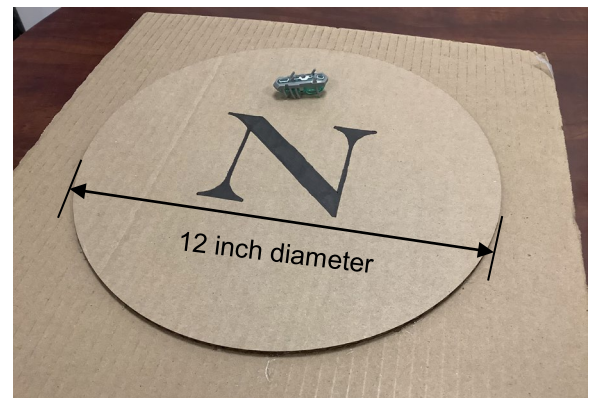
The objective is to modify an ordinary Hexbug Nano with paper & tape to keep it in the circle longer than an opponent's Hexbug. Design, build & test!

Challenge another Hexbug to a head-to-head battle!

- ✓ Modify your Hexbug with only pieces of index card & tape so that it STAYS in the sumo ring!
- ✓ You're OUT if your Hexbug leaves the sumo ring circle (or is pushed out by another Hexbug).

Supplies

- One (1) Hexbug per student or team
- One (1) cardboard sumo mat (cardboard circle)
- One (1) index card (any size)
- One (1) roll of Scotch tape
- One (1) pair of scissors



Constraints

- Rule #1: You may ONLY attach pieces of tape & index card to Hexbug, nothing else.
- Rule #2: Your Hexbug must start upright on its feet at the beginning of each battle.
- Rule #3: Once your battle has begun, no human interference allowed.

