Red Robot 2021 — RULES
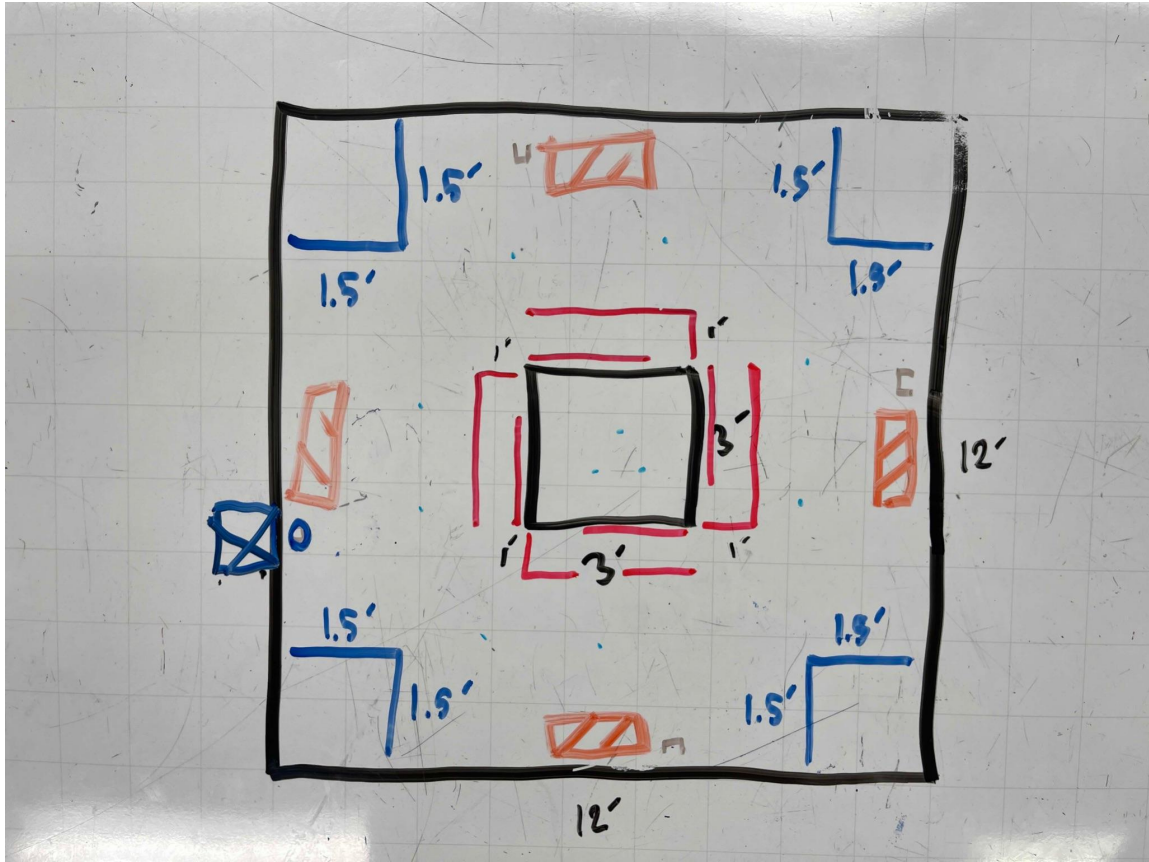
Overview

- **Abstract**: 4 teams each control two robots to collect tokens, bring them to a home base zone, and prevent other teams from stealing tokens from your zone. Rounds will last 5 minutes.
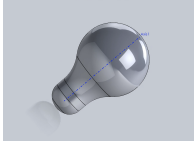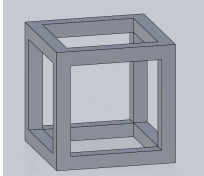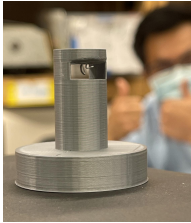
Arena Design

- Current Dimensions (walls assumed to be 2x4s):
  - 12'x12' overall
  - 1.5'x1.5' bases
  - 3'x3' center area, raised 5" off the ground
  - 1' wide ramps
- Relatively square
- Two outer areas blocked by gate
- Middle raised platform accessible by ramps
- Items below platform (Height-based obstacle)
- Collaboration area (electromagnet button)

Tokens

- Tokens have different point values and different shapes
- Tokens have different colors and labels; if you get combos you get bonus points.

Item Type	Quantity	Points	Total Points
dumbbell	10	30	300
Lightbulb	10	50	500
Cube thing	10	20	200
Screw with a hole in it (zip-tie loop)	20 (10 have magnets, 10 do not)	10 for non-magnet 20 for magnet	100+200 = 300

3 peas in a pod	10	50	500
Total	**60**		**2100**

Combo	Bonus
Golden Snitch (hidden at the start, marked on bottom of a random item)	1.15x on total score
All of one color (does not stack)	+250
8 of one color (does not stack)	+125
4 of one color (does not stack)	+50
One of each color (applies only once)	+50
Every single item—sharing is caring :)	−10000 you lose as a plot twist
No pieces	Candy consolation prize
Both robots are flipped over at the end	+100

Robot Design

- Both robots must fit in their corner at the start, not taller than 18"
- Resources allowed (per team):
    - 2x robot base kits
    - 4x Servos
    - Unlimited wood/acrylic
    - Adhesives/fasteners
    - (Officers have authority to deny/confiscate resource requests)
- No anti-robot design, except for flipping and wedging
    - Damage to other robots is forbidden (**no water**)
    - No anti-human design either
    - No grabbing other robots for more than 30 seconds.
- No detachments

Game Rules

- Total match time: 5 minutes
- Unflipping: either do it yourself, or have a timeout penalty of 30 seconds (while being returned to base).
- If robot is damaged by anti-robot design, judges will decide the punishment for the team with anti-robot design (up to and including DQ).
- If robot is damaged otherwise, RIP tough luck :/
  - Corpse lies where it died (not removed from field)
- Only allowed to move/carry 3 items per robot at a time
- Failure to comply with rules will result in an immediate 30 second freeze of the robot

Prizes

- 1st Place
- 2nd Place
- 3rd Place
- Sponsors' Choice (Best Design)
- Mentors' Choice (Most Creative)
- Spiciest meme award