

Robot Scoring Requirements

Auto

- Leave (3 pts)
- Qty 3 L4 coral cycles (7 pts each), with HP pickup
- Push another robot off the line into barge
- TOTAL = 27 pts

Teleop (no coop)

- Qty 2 Mixed cycles, L4 (9 pts each) = 18 (mixed is a want, rather than a need)
- Qty 4 Mixed cycles, L3 (8 pts each) = 32
- Qty 1 L3 coral cycles from HP station (4 pts each) = 4
- Qty 5 L2 coral = 15
- Qty 5 L1 coral = 10
- TOTAL 17 cycles, 8s mixed, 7s coral (!!!)
- TOTAL = 79. Note, was closer to 100 if we didn't focus on coral RP!

Teleop (with coop)

- Qty 5 Mixed cycles, L4 (9 pts each) = 45
- Qty 2 cycles to processor (0 overall pts)
- Qty 5 L3 coral cycles from HP station (4 pts each) = 20
- Qty 5 L2 coral = 15
- TOTAL = 80

Endgame

- Single deep climb < 12s, (12pts), TOTAL = 12
- Buddy deep climb < 24s (24 pts)

TOTAL = 118 pts

Robot Skills Required:

Must have:

- Drive (fast)
- Collect Coral from the HP
- Fast alignment with reef (computer vision or mechanical)
- Score Coral (fast) in L1 through L4 Reef
- Dislodge Algae from the Reef
- Climb a Deep Cage (even if it's swinging)
- Avoid CAGE entanglement
- Avoid REEF entanglement
- Avoid gamepieces stuck on robot
- Drive while mechanism raised (to be fast)
- Avoid damage by cages
- Don't tip

Nice to Have:

- Self-right
- Shoot Algae into Net
- Score Algae into Processor
- Push/drag a robot across line in auto / endgame
- Be significantly underweight
- Buddy deep climb
- Post-buzzer climb

Won't Have:

- Collect gamepieces from floor (unless rolling coral significantly reduces cycle time)
- Climb shallow cage

Questions

- A. Are 7s L2+ cycles achievable? (tolerances, visibility, etc)
- B. Faster to pick up coral from floor or HP station?
- C. How far can you shoot algae and get it into the net (mixed cycles)?
- D. How fast can a processor cycle get?
- E. Is dropping algae cycles completely OK?
- ~~F. Does L4 coral touch L3 algae? - answer is no.~~
- G. Can we do 12s deep climb?
- H. Can we place coral and remove algae within 1s (mixed cycles) without knocking coral?
- I. Is ignoring the pre-placed gamepieces in auto a mistake?
- ~~J. Do coral touching algae in auto still count for auto points if algae removed in teleop? - answer is no: <https://frc-qa.firstinspires.org/qa/10>~~
- K. How should we load coral from HP station (rolling or sliding-endwise)
- L. How many Algae fit in the Barge before robots / HPs have trouble scoring more?