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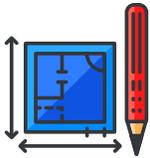
Week 1 -Brainstorm

- Entire team watches the kickoff together. Full day spent understanding the challenge and rules. Determine what aspects of the challenge the team would like to focus on.
- Brainstorm possible systems using various methods like brain writing, 6 hats, and Pugh matrices.

Design Goals Set:

- Fill a Rocket by being able to place both hatches and cargo at all three heights.
- Level 3 Habitat Climb.

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Week 2 - Prototype

- Break into sub groups to build concept prototypes.
- Demonstrate options to the team.

Design Decisions Made:

- Tank drive chassis, with 2 speed transmission and pneumatic shifter
- Pneumatic level lift pistons to reach top of habitat
- Velcro with pneumatic eject pistons for the hatch manipulation.
- Pair of rotating bars on a wrist for cargo manipulation.
- Elevator to place hatches and cargo on top level of rocket

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Week 3 - Detailed Design

- Using CAD, layout detailed design of the chassis, elevator, and ball & hatch manipulator.
- Order parts needed for each aspect of the design.

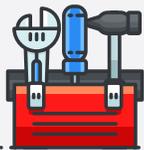
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Week 4 - More Design and Start Build

- Completed the chassis and first two stages of the elevator.
- Worked on design of ball and hatch manipulator.
- Had several setbacks due to extreme weather and school closures.

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Week 5 - Continue Building

- Completed elevator.
- Built up electrical board.
- Installed pneumatic system.
- Completed preliminary programming.
- Build hatch and cargo manipulator arm.
- Missed more school due to snow and ice.

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Week 6 - Finish Assembly, Testing, and Drive Practice

- Completed elevator, ball & hatch manipulator, and programming.
- Tested all features separately and made repair list.
- PID tuned the wrist for the cargo and hatch manipulator.
- PID tuned the elevator, and programmed height presets.
- Drive team practice and mechanical refinement.
- Decided to leave the Level 3 lift out of the bag but continue to work on it separately with hopes of installing during 6 hours of out of bag time.