

**1. How big is the field?**

- The field is 4 feet by 8 feet.

**2. How big are the objects?**

- Packages are 1.5 and 1 inch cubes. Fuel tanks have a diameter of  $\sim .55$  inches and are  $\sim 2$  inches tall. Thrusters are .49 inch tall with an inside diameter of .55 inches and an outside diameter of 1.38 inches. All other measurements can be found in the design PDF and files.

**3. Are the colors painted on the field?**

- Yes.

**4. How thick is the yellow line?**

- The yellow line is 2 inches thick.

**5. How is the yellow line placed?**

- The yellow line is placed in the center between the sides and between the ramp and the wall away from the ramp.

**6. Is the orange star painted on the field?**

- No, it is for zone reference only.

**7. What is the thickness of the white line?**

- 1 inch.

**8. Is a white line painted on both sides of the crater?**

- Yes.

**9. Are the dashed lines painted?**

- No.

**10. What are the colors of the game pieces?**

- Fuel Tanks: Matte Orange
- Thrusters: Copper
- Large Packages: Cardboard Spool Light Brown
- Small Packages: Matte Purple

Please see BOM for 3D print filament selection.

**11. Are the larger packages always placed in the same place?**

- Yes.

**12. Are the smaller packages placed in the same place?**

- No, they are randomly placed.

**13. Are the fuel tanks always placed in the same place?**

- Yes.

**14. Are the thrusters fixed to the board?**

- Yes.

**15. How are the thrusters fixed to the board?**

- Using gel super glue provided in the BOM.

**16. Do you need to push the launch button?**

- To stop the timer and get specified points based on the time to complete the competition.

**17. How long does each team have to complete the competition?**

- Each team has 3 minutes to complete the competition.

**18. Do you get any points after pushing the launch button?**

- No, any changes made after pushing the launch/stop timer button will not result in additional points being acquired.

**19. What is considered "completing the competition"? Pressing the button?**

- Completing the competition means pushing the launch button. At this point, your robot should stop moving, and scoring will be counted.

**20. Can you reach over sections and drop things?**

- There is no limitation regarding this.

**21. Can you have projectiles?**

- Due to safety concerns, projectiles are not allowed.

**22. Can you have flying drones?**

- No, flying drones are not allowed.

**23. Do you have to use the physical zip line to cross the crater?**

- There is no requirement to utilize the zip line to cross.

**24. Can you have material dropped from the robot units?**

- Yes, as long as the material/objects can be removed quickly after the competition run.

**25. Do you need to transport one package or fuel tank at a time?**

- No, you can transport multiple at the same time.

**26. Are the thrusters (the cone-shaped base) located in the Thruster Fuel Tank Assembly zone?**

- Yes.

**27. What is the steel screw eye for?**

- To attach the zip line tensioner.

**28. How is the zip line assembly mounted to the field?**

- A 45-degree corner is cut to accommodate the zip line mount and is then affixed to the arch. The mount is positioned at the top of the arch at higher elevations and at the bottom at the landing. This arrangement ensures the robot does not collide with the mounting bracket while attaching to the line.