



PRELIMINARY DESIGN REPORT (PDR) GUIDELINES

The Preliminary Design Report (PDR) is part of the NASA Space Systems Engineering process. The PDR is designed to answer the following question: *Does the preliminary design meet all the system requirements within acceptable cost, schedule, and risk?*

The PDR is designed to ensure that teams focus on a **Safe Successful Flight Mission**. The report should incorporate a design to successfully fly and recover the team's rocket. The team should obtain an understanding of altimeter functions and data downloads from these devices. The report will consist of 2-3 pages.

1. Explain your team objectives for the challenge.
2. Explain the design characteristics of your rocket (e.g. diameter, length, type of airframe and payload, size of fins and fin configuration, motor impulse, etc.).
3. Calculate the predicted altitude based on the information given in question 2.
4. List the type of commercial altimeters that will be used, along with their functions (e.g. dual deployment, informational data, payload operation, etc.).
5. State whether or not a tracking device will be used?
6. List team members who will perform special roles and project assignments.
 - a. Payload Specialist
 - b. Parachute Recovery System. (drogue and main)
 - c. Arming and Programming Flight Altimeters
 - d. Lead Airframe Construction Analyst
 - e. Pre-launch Field Team Members
 - f. Recovery Team

If your team creates a pre-launch checklist please attach it to the PDR as an amendment.