Lesson 5 Rocketry vocabulary/concepts 11/16/2021

* Primer vs paint (don’t forget to sand surfaces before applying either one – getting paint to stick to the plastic nosecone might be the hardest thing)
* Location of upper rail button (a calculation – use OpenRocket model – place near (but no lower than) CG (preferred) or else on av-bay collar (allowed)) – ensure axial alignment with the lower rail button!
* Placement of “loops” in recovery harness for drogue and main parachutes – place so as to avoid letting parts strike each other while hanging down
* Planned separation just below the av-bay (at apogee; for drogue); separation just below the nosecone (upon descent; for main parachute)
  + Friction fit vs rivets vs (breakable) shear pins (and where to use each)
* Avoid drag separation; internal pressurization separation
  + Bleed hole(s) in lower airframe (and why)
* Static port(s) in av-bay and possibly elsewhere (a calculation)
* Amount of charge for two ejection charges (a calculation) (use the simple ejection charge spreadsheet/calculator - posted)
* Ejection charge vs motor eject (note: the built-in charge is 1.3 grams for all 38 mm Cesaroni motors)
* Igniter vs e-match
* Grind down delay grain (a calculation – use OpenRocket model) (we will use a “delay-grinding tool” to accomplish this)

Link to document repository

http://www.aem.umn.edu/people/faculty/flaten/Rocketry\_Remote\_Lessons\_Fall\_2021/

Sophia’s evolving photo-build instructions – check back regularly:

<https://docs.google.com/presentation/d/1NritqFEBkQI95c4ex6SjiA-08uaoEcFUydgjlA6mtdY/edit#slide=id.p>