

### **Some General Comments on Drafts of the Parametric Design Process (section 3)**

Although you defined the design problem earlier in the report and explained what the parameters and constraints are, here you will do so again to provide context for your testing strategy:

- What materials are you limited to?
- What design constraints have been imposed?
- What parameters are under your control?
- How did you define your parametric model of the fin? Why did you choose this particular parametric model? **Show the figure of the parametric model and refer to it.**
- How, generally, did you go about optimizing the rocket?

Then you will discuss your specific procedures in enough detail so that your reader could repeat them if desired.

- Which parameter did you start with and why?
- What were the values of the other parameters?
- How did you choose the values of parameters that you were holding constant?
- How did you vary the parameter being tested (what increments or variations)?
- What were the results? **Show them and refer to them.**
- How did you interpret the results?

Following the discussion of the first parameter, you should begin a new paragraph and explain the procedure for varying and testing the next parameter, following roughly the same pattern. This is what is meant by presenting your process in a way that is **systematic**.

A few other comments:

- Do not write this section in the first person (do not say “we”). Your language should also be precise and formal, not conversational. Watch out for wordy phrases and repetition—remember what your readers are like.
- Do not give lists of results in the text—data points are too hard to read in sentences. Show in a table or plot, whichever best highlights what you want the reader to see. In the text, you can state ranges of values that were tested and increments by which you varied the values, and, of course, you should identify the optimal value.
- Refer to figures as specified in the assignment (see p. 200 in your book for examples) and label them correctly.
- Show figures after the paragraph in which you refer to them. Make sure they are big enough and show all requested dimensions and labels.