

## SUPER SAILS! - LESSON 7 – SAILBOAT DESIGN

### **Sailboat Design Requirements**

Your Sailboat Design Report must be:

- Word processed with picture of computer generated sail plan
- Portrait format with clearly labeled section headings
- Stapled in upper left hand corner
- Concise and clearly written

Your target reader should be someone who is capable of understanding the physics but has never seen your design.

### **Cover Page**

Include:

- The title of the report
- Picture of sail design (hull shape + sail plan)
- The names of all group members

### **Abstract**

The abstract is a concise statement of purpose of the project and an overall summary of your sail design.

*(1-2 paragraphs)*

### **Design**

Draw a labeled diagram of your design.

Label (as applicable): Luff, Leech, Foot,

Include the following measurements:

Sail Design Specifications

Sail Area: \_\_\_\_\_ square ft.

### **Data**

Present the data collected in the design. Please note that data is something that is measured. Present all the calculations used to determine the area of our sail.

### **Results, Analysis, & Discussion**

Describe the design choices that were made, and why you chose each.

Discuss your results, including comparisons with other sail designs.

Describe the ideal environment in which your design would perform at optimal efficiency (Is it a racing sail? A cruising sail?).

*(2-3 paragraphs)*

### **Comments & Conclusion**

This section is very similar to the abstract, but allow for comments and explanations.

- Summarize the main design choices for the overall design
- Comment on potential problems that might arise with your design in its ideal environment

*(1 paragraph)*

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### Results, Analysis, & Discussion

Describe the design choices that were made, and why you chose each. Discuss your results, including comparisons with other boat designs. Explain why specific design choices were made and how they add to the overall design and functionality. Describe the ideal environment in which your design would perform at optimal efficiency (Is it a racing sailboat? An offshore cruising sailboat?).  
*(2-3 paragraphs)*

### Comments & Conclusion

This section is very similar to the abstract, but allow for comments and explanations.

- Summarize the main design choices for the overall design
- Comment on potential problems that might arise with your design in its ideal environment

*(1 paragraph)*

