

Post-KSC Trip: K'Nex Truss Design Challenge Engineering Report

Modifications to make to design from KSC test. (Sketch below.)

Glue or tape this side down in your
interactive science notebook.

1. Why do I think it will work? _____

Design approved by Project Head _____

Phase 2: Testing (This is recorded in your Science Notebook)

Step 1: **Testing**- How will I record the data from our tests?

Documentation of the length of the truss and the amount of weight the truss can hold.

Final length of truss _____ centimeters

Final weight of truss _____ kilograms

Step 2: **Test Analysis**—Answer these questions every time you test your prototype.

1. Describe what happened when you tested your truss. Include data that provides evidence of your description.

2. What makes your truss work well?

3. What needs to be improved?

4. How will I modify my prototype?

5. Why do I think that will work?

Remember to get each Analysis approved by the Project Head before beginning modifications.

Step 3: **Modify** your prototype.

Repeat Phase 2 steps until you have a final design that you will present in Phase 3.

Phase 3: Presentation

You will present at an Engineers' Conference/Community Meeting to NASA. You are trying to win the contract to build the next truss section for the ISS. With your team, decide how you are going to present your design. Consider these questions:

- Who will explain how the design works?
- Who will give evidence on the effectiveness of the design?
- Who will answer questions from the audience? **Practice your presentation. You are trying to “sell” your design as the most effective. Remember to use evidence from your tests to back up your claims of effectiveness. Keep in mind the specifications for the design.**