



Biomimicry: Innovation Inspired by Nature

GROUP CHALLENGE: ABSTRACT

Note: you'll be given one full class period to work on part 3 & part 4 of the group challenge assignment (November 13). Be sure to arrive at class prepared to work on these assignments. Bring the materials you'll need (computers, natural models list, taxonomy, etc.) to this class.

Part 3: Nature's Technologies Report (10%)

In this part of the group challenge assignment, your group will **author a professional report** that will be presented to the Fortune 500 company that hired your biomimetic consulting firm.

Things you'll want to include in the report are listed below. You are NOT limited to this list. The list is only meant to serve as a guideline. Be creative. Make your report eye-pleasing (lots of "white space", captivating visuals, easy to read and understand, clearly laid-out, and organized). Think about having to show this report to a roomful of business executives (that do not have any science background) that will decide whether or not to hire your firm to work 'in-house" at the company for the next 2 years to take the challenge from the ideas phase to the product design phase.

- Describe your company (title, team profiles, expertise, etc.)
- State design challenge (problem statement)
- Summarize key information from your Innovative Solutions worksheet
- Provide your 50+ natural models with brief descriptions
- Provide your detailed taxonomy in an organized format
- Provide a detailed selection of natural models from your list of 50
 - Select 6-10 ideal natural models that represent the spectrum of **functions** (form, process, and system) from your taxonomy
 - Provide visuals of the selected models (pictures or drawings)
 - Detail the **mechanism** (to the best of your research) for each of the selected models
- Provide potential design ideas that stem from your selected natural models
- Summarize your findings (note: assume your audience has no science or biological background)
- Provide relevant references/bibliography

Part 4: Group Final Presentation (10%)

In this part of the group challenge assignment, your group will be role-playing. Your group will give a **formal Power Point presentation** to the Fortune 500 company that hired your biomimetic consulting firm (the class). The presentation will be a concise and concentrated version of your Nature's Technologies Report.

Here are a few guidelines:

- Limit your talk to **30 minutes**

- You'll be given an **additional 15 minutes for questions**
- Practice your presentation as a group. Know your stuff.
- Be prepared to field questions about your natural models & company
- Be creative. Be organized. Make it eye-pleasing.
- Dress for the occasion. Act professionally.

Here are a **few tips for giving power point** talks that have been helpful to me:

A. 5 flaws to avoid in the overall talk:

- no clear point
- no audience benefit
- no flow
- too detailed
- too long

- B. A talk should be presenter-focused. The audience should look at your slides for a second and then be looking at you while you speak (not reading). A presentation is not a document and should not be able to stand alone

Specific slide tips:

- eliminate line breaks (use one line only)- takes reader too much time to read and always unnecessary
- reduce sub-bullets (just say the minor points)
- never use more than 5 - 6 lines per slide
- "less is more" (simple backgrounds, etc)
- if applicable, graphics are better than tables (use few but clear & colourful visuals)
- for both table and figures- only put important info on slide
- if using a quote - be quiet while it is up - do not read it, or talk while audience is reading
- be consistent with font size/type, background color and capitalization