

## Sustainable Solutions Biomimicry Workshop 2015 – Class #5

**Class 5:** Understanding Life's Principles. Biomimicry as an evaluation tool, using a systems approach

**Intent of Class:** Have a deeper understanding of biomimicry's Life Principles and learn how to use Life's Principles as an evaluation tool. Introduction to systems thinking.

**Homework:** A) Continue work on your challenge, research nature and abstract strategies  
B) Develop a summary of your work to-date C) In-Person session logistics D) iSite F)  
Optional: radio show interview and article

**Homework is due to Marie and Diana via email by August 4**

**A) Continue work on your challenge, research nature and abstract strategies.** Continue to look for strategies on how Nature performs the function(s) of your challenge by observing Nature, accessing AskNature and other biological resources. Sheridan is a great researcher, she is working for you until August 13<sup>th</sup>, so take advantage of her expertise. You may also want to include information on how Nature does not do your function – for example, if you look up information on how nature communicates and find a study about communication strategies that don't work in Nature, this may be relevant to solving your challenge. Don't forget this is just the first step; you must also read the article or review your observations to abstract the strategy for your function (s). You will need to have your research complete by August 4<sup>th</sup> for the in person session. Be sure to document what you have discovered and bring this information to the in person session.

**B) Develop a summary of your work to-date:** During the in-person session you will work with a biologist and a designer to take the strategies nature uses to perform your function(s) and help your team dive deeper into identifying a solution(s). Review the Challenge to Biology work sheet and complete this form for your challenge. **It is critical that these summaries are completed by August 4<sup>th</sup>** so that they can be sent to the instructors and biomimicry experts for review prior to the workshop. Don't forget to add information on observations you have made, AskNature and other resources. Keep the strategies you have abstracted short and to the point. Your Team can continue to research strategies and add them to your summary after this date. You will be asked to bring the most up-to-date summary to the in- person session. The biologist and designer at the in-person session will help you tease out the important information – so more information is better than less.

**C) In-Person session logistics:** We are starting to plan for the in-person session. Attached is the form to “register” for this session and to gather information on food, camp site needs, car pools, equipment sharing, etc. It is important that we know by July 31<sup>st</sup> all of the logistical details for this event. As a reminder, the in-person cost is \$100 for food. This fee will be collected the first day of the in-person session. If you register for this session you will be responsible for paying this amount once the food has been ordered, even if you have to cancel. It

is required that at least one person from each challenge team attend the in person session and be responsible for sharing the session information with your team.

**D) iSite:** Continue your iSite: Here are a few ideas that focus on looking for Life's Principles in Nature and observations that may help you with your team challenge.

**Observe Life's Principles in Action:** choose one or more of Life's Principles that interest you. Look for the Life Principle in nature. Study an organism and see how it incorporates this principle into its life cycle. Use your skills of observation (think forms, processes, systems; scales in time and space; patterns, etc.) to explore this Life Principle. Take a list of Life's Principles with you to your iSite and see how many you can identify. Record your observations.

**Find examples of Nature performing your team's function(s):** At your iSite think about your challenge and find an organism that is performing the function(s) of your challenge. Record your observations, then AskNature or Ask Sheridan to dive deeper into the mechanism for the organism you have observed.

**F) Optional radio show:** During the 2011 Bioneers Conference in San Rafael CA, Dayna Baumeister and Marie were interviewed for a segment of the Bioneers Radio show. Cut and paste this link into your internet browser to listen to the 30 minute broadcast:

<http://www.bioneers.org/radio/2012-radio-series/millions-of-elders>

**Optional article:** Leverage Points: Places to Intervene in the System by Donella Meadows.  
[http://www.sustainabilityinstitute.org/pubs/Leverage\\_Points.pdf](http://www.sustainabilityinstitute.org/pubs/Leverage_Points.pdf)