

Biomimicry Brainstorming

This activity is designed to help you brainstorm ways to apply your bio-inspired design strategies to the design problem you are working on.

Supplies Needed:

Large sheet of paper or flip chart, markers, sticky notes, index cards, and you the design strategies you have abstracted from your biological models.

Instructions:

1. Get together with your design team and write your design question (“How might we...”) across the top of a large piece of paper.
2. Look over your abstracted design strategies and select the ones you think are most interesting and inspiring. Write each of them on an index card (one strategy per card). Place the completed index cards in a pile in the center of the table.
3. As a team, take turns reading the design strategies aloud from the stack of index cards. After each strategy is read, spend a few minutes brainstorming an answer to the question “How can this strategy help solve our design problem?”
4. Record all of the ideas generated on sticky notes and attach them to the large paper. Try to capture ideas as doodles, sketches, or short statements. It’s okay if the ideas are incomplete or in the form of questions; each note may represent only a single component or elements of a larger possible solution.
5. After about 30 minutes or when you have explored all of the design strategy cards, study the collection of ideas you have captured and cluster them by moving the sticky notes around the large piece of paper.
6. Look for patterns and relationships between the ideas and clusters. Ask yourselves: Do any of the ideas seem to fit together? Can we recombine or mix them to arrive at new ideas? Draw lines, arrows, and add notes as needed to capture your observations and additional ideas.

Suggestions:

The point of brainstorming is to generate a large number of potential solutions, so it is important to keep an open mind and encourage all ideas—even if they don’t seem realistic at first. Be generous with your ideas and withhold criticism of ideas offered by your teammates. It also may be beneficial to brainstorm on your own and then come back together as a group to share all ideas.

You may be tempted to focus on strategies that fit a design solution you already have in mind or that already exists in the world in a similar form. Try to avoid this. Instead, focus on strategies that best match the context and what it is your team wants the design solution to do (function).