

Biomimicry



Principles: Example 1

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Comments:

Very good work. You clearly identified what principles you used; you clearly described a resulting design for each principle; and you illustrated each design. Presentation was pretty good--fun bold colors and cover page, great photoshop rendering of the last idea, but the sketches for the other ideas needed improvement. And great practical ideas that improve both sustainability and features.

Both idea #1 and idea #4 are using the same principle--readily available energy--but you're right that #5 also gives multi-functional design. It sounds like a great idea! Actually, all of the ideas sound good, and seem quite achievable technologically. #1 and #4 are especially nice in that they both reduce material use and eliminate electricity impacts, which give you huge improvements in impact. They're probably helpful business innovations as well, given that they'd likely reduce production cost.

How does life optimize energy and material use in balance with a healthy ecosystem?

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Selected Principles:

1. Be Locally Attuned & Responsive:
Use Readily Available Energy
 2. Be Resource Efficient (Material & Energy): *Fit Form to Function*
 3. Be Resource Efficient (Material & Energy): *Use Low Energy Processes*
 4. Be Resource Efficient (Material & Energy): *Use Multi-Functional Design*
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All stages of the Skin Optimizing Platform's lifecycle have environmental impacts, from raw materials extraction to end-of-life. By examining each stage and performing impact assessments, the Skin Optimizing Platform can be redesigned as a more sustainable product, while still aligning with key business goals.

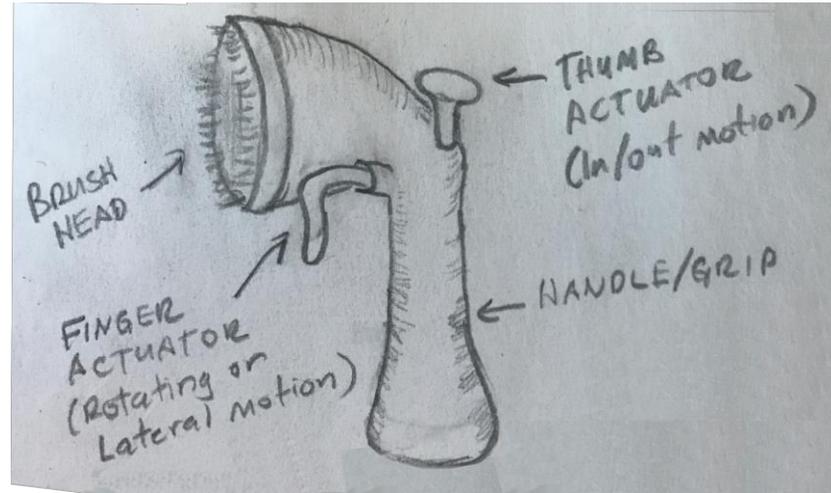
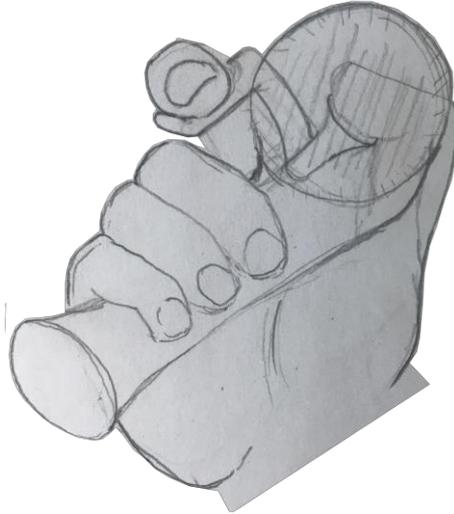
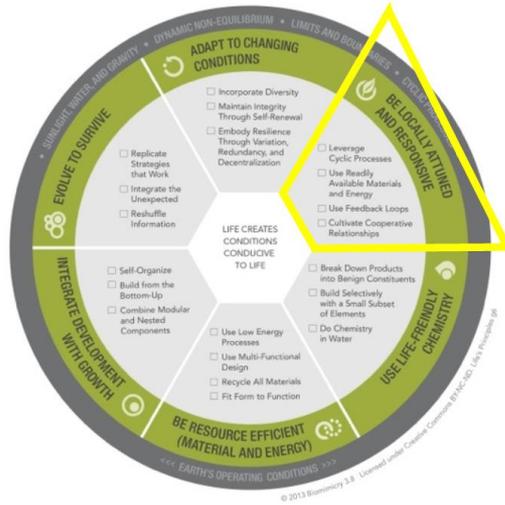


The Skin Optimizing Platform is a professional skin care device using newly developed bi-planer motion.

The device includes:

- two LI-ION batteries that partner with an LED base for inductive charging
- three interchangeable treatment brush attachments that require replacing (recommended every three months)
- waterproof casing fused together with sonic welding; however, as a result the device is not user serviceable and the batteries cannot be replaced.

Principle #1 – Be Locally Attuned & Responsive

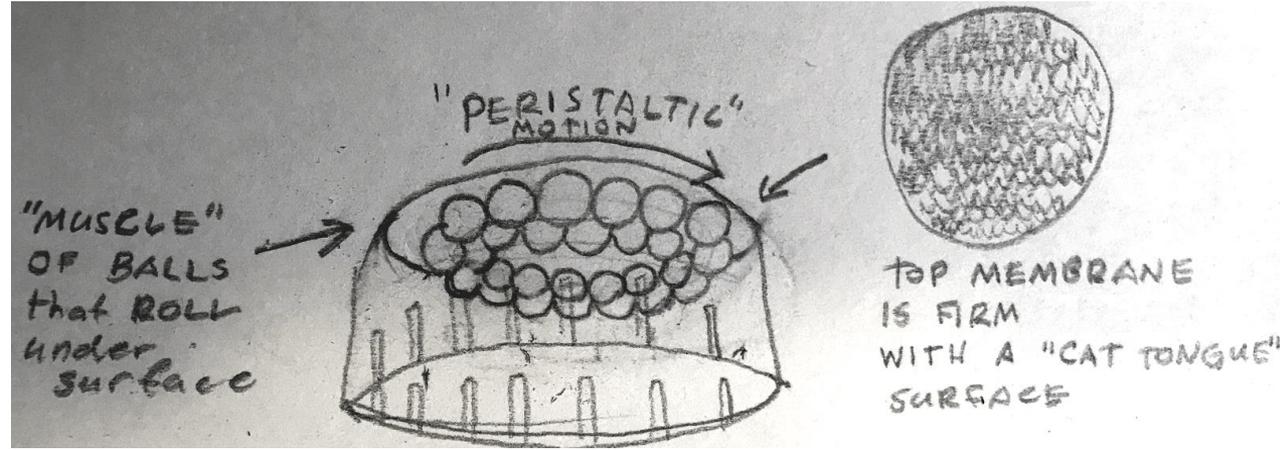


CONDITIONS

- ❖ Leverage cyclic processes
- ❖ **Use readily available materials & energy**
- ❖ Use feedback loops
- ❖ Cultivate cooperative relationships

The device is powered by a mechanism that transfers energy from index finger and thumb motion to the cleaning head, optimized for cleansing motions.

Principle #3 – Be Resource Efficient (Material & Energy)



CONDITIONS

- ❖ Use low energy processes
- ❖ Use multi-functional design
- ❖ Recycle all materials
- ❖ Fit form to function

Consider low-energy designs that can achieve cleansing with less motion. How can bio-inspired shapes, material properties and mechanisms achieve cleansing without brushes?

Principle #4 – Be Resource Efficient (Material & Energy)



CONDITIONS

- ❖ Use low energy processes
- ❖ Use multi-functional design
- ❖ Recycle all materials
- ❖ Fit form to function

Modify design to be an adaptable shower head and cleansing brush, where the water flows directly through the head to function as a normal shower (user can use a switch to vary the water pressure and output). Detaching the head from its stand, the user can use the brush directly on their face and/or body.

This eliminates the need for a motor and energy completely (depending on the water pressure as device power).