



Humans often look to nature for lessons on how to solve problems. Engineers have built self-cooled buildings inspired by termite nests and designers are studying the peregrine falcon's flight as inspiration for future aircraft.

Bios (life) + mimesis (to imitate) = Biomimicry

In this activity, you will use biomimicry to design new versions of everyday objects! Use a natural organism's special features to design a new human object. Then sketch or design your new biomimicry mash-up!



Need Inspiration: Check out our [Tech Interactive at Home site](#), [Ask Nature](#) and the [Biomimicry Institute](#) for some amazing examples!

Step 1. Nature

Choose one organism.

Snowshoe Hare



- Large, furry hind feet allow running fast on snow.
- Seasonal coat color changes to hide from predators.

Lotus Plant



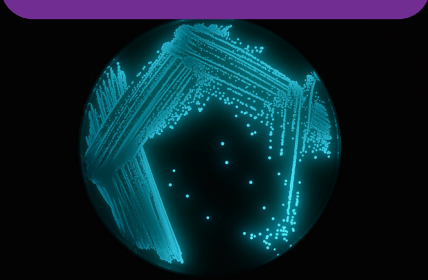
- Leaves have a waxy surface that repels water and dirt.
- Nano-scale spikes on surface allow water and dirt to slide off.

Honey Bee



- Cool off the hive by fanning it with their wings and hosing it off with regurgitated water.
- Hexagonal shape of honeycomb holds more honey and uses less wax.

Photobacterium



- Bioluminescent bacteria light up when touched or moved.
- Symbiotic relationship with marine creatures, (like fish and octopi) can make them glow.

Woodpecker



- Sharp, thick bill chisels holes.
- Brain protected from impact by both spongy bone behind it and long tongue that wraps around it.

YOU PICK!

What's your favorite organism and what adaptations do they have?

Step 2. Human Objects

Choose one human object.

City



- Many different types of buildings, and their infrastructure (plumbing, electricity, internet, roads, transportation etc).

Backpack



- Used to carry things without using your hands.

Jacket



- Protects from cold, rainy and windy weather.

Furniture



- Stores items efficiently and in a safe place.

Bicycle



- Used to transport people safely and quickly.

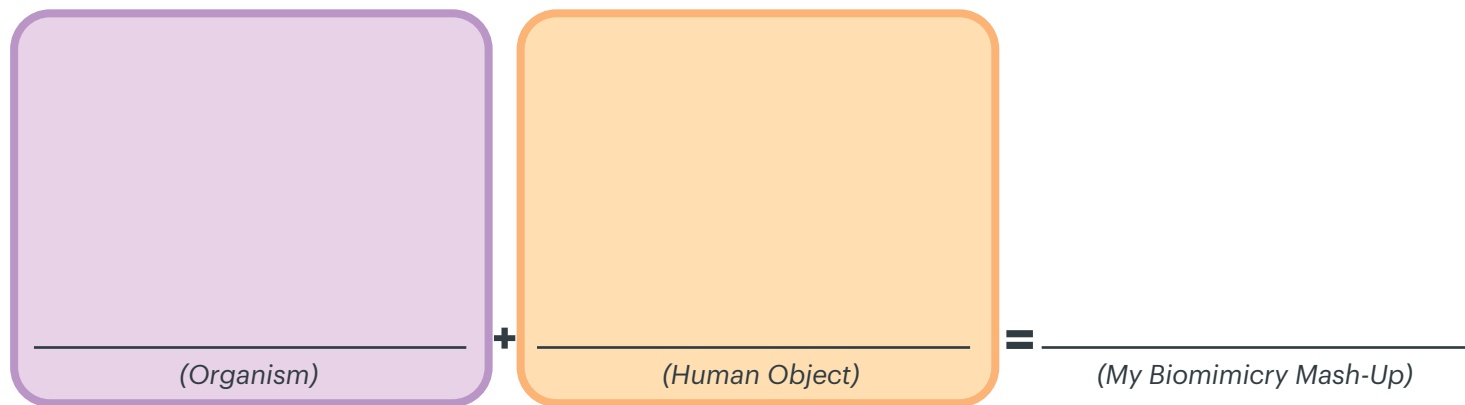
YOU PICK!

Look around your house — what's something you use often?



Step 3. Mash-Up!

Brainstorm new innovative combinations of the items you chose! Sketch and design your idea on another paper!



Feel like engineering? Create a prototype for your mash-up out of materials around your house!

Share Your Results! Keep us posted about your designs on social media with **#TheTechatHome**.



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