

NURTURING A NEW SPECIES OF ENTREPRENEUR

We're equipping a new generation of innovators to address the most critical issues of our time by looking to nature to design solutions that give more than they take.



BIOMIMICRY
INSTITUTE

ANNUAL REPORT
2017/2018

A MESSAGE FROM THE EXECUTIVE DIRECTOR

IN A RECENT INTERVIEW, LEGENDARY ENERGY THOUGHT-LEADER AMORY LOVINS WAS ASKED, **“WHAT ISN’T BEING TALKED ABOUT ENOUGH?”** HIS ANSWER:

“Biomimicry, innovation inspired by nature, is one of the great design revolutions going on. AskNature.org and the other tools that author Janine Benyus created for biomimetic design seem to be extremely important and need to be talked about much more.”

Couple that statement with some of our recent press: CBS, the BBC, and PBS have all run stories on biomimicry featuring either Janine or one of our Ray of Hope Prize winners from the Launchpad. It is phenomenal coverage for such a small organization, albeit one that makes big ripples.

Over the last two years, the period covered by this report, we have refined our strategic vision around this core question of impact. Impact is a tricky one to measure when you are talking about a practice, a paradigm shift, a movement. Do we count the millions of people who learn about biomimicry or use our database, AskNature? Do we look to the amount of carbon sequestered or water captured through our Launchpad teams’ inventions? Or do we count the number of K-12 and university students practicing biomimicry through our design challenges? Yes. All of the above. And yet the nagging question remains, how quickly can we expect the world to look

different because of our efforts? That’s the real impact we seek: the redesign of everything according to the principles and patterns found in nature.

So we asked ourselves, how do we reach the people who make our homes, our energy systems, our rainproof jackets, our blue jeans? We landed on an approach that reaches people across a continuum of learning - from middle-school student through an early-stage start-up.

By offering free tools and resources like AskNature, we provide open ACCESS to learning biomimicry. By creating opportunities to PRACTICE biomimicry in action via design challenges, we provide the platform for students and educators to learn and teach with a different lens. Finally, by providing a pathway to entrepreneurship for early-stage biomimetic innovations, we work to bring about a CULTURE SHIFT toward seeing biomimicry as “a reflex,” as our board member Marilyn Waite called it.

In the following pages, you’ll learn about the ever-widening impact we’re having across the globe. But what’s less quantifiable is the way people become transformed by their exposure to biomimicry - those who no longer can or want to design in a disposable way. That’s what gives me hope that we can and will meet the critical challenges ahead.

Thank you for being part of this community and for helping us, as Janine says, remember that a sustainable world already exists.



Beth Rattner
*Biomimicry
Executive
Director*

A MESSAGE FROM JANINE BENYUS



Given its depth and breadth, how does one categorize biomimicry? Is it a design discipline, a branch of science, a problem-solving method, a sustainability ethos, a movement, a stance toward nature, a new way of viewing and valuing biodiversity? Yes, yes, and yes, which is why biomimicry is an idea that acquires people, a meme that propagates in our culture like an adaptive gene.”

Biomimicry Institute co-founder

A MESSAGE FROM THE BOARD CHAIR

When I was introduced to biomimicry, I thought, “Finally! A scientific methodology showing how we humans would do well emulating nature rather than trying to control it.” These are challenging times we live in with many complex and seemingly intractable problems. It’s important we have something positive to work for to create the world we know is possible, necessary even. Shifting culture towards these values takes time and the Institute has been planting the seeds for biomimicry to take root for many years.

Now things are really taking off -- it’s exciting to see the enormous increase in the demand for Design Challenges, the transformation that occurs in participants, and the general appetite for more climate solutions applying nature’s wisdom. Now is the time for the Institute to leap! It’s my honor and privilege to serve on the Board of Directors. Thank you for joining us - the Institute truly could not do this work without you and your support.



Erika Harrison
Biomimicry Institute board chair

OUR MISSION, VISION & IMPACT

THROUGH EDUCATION AND ENTREPRENEURSHIP,
WE'RE HELPING PEOPLE CREATE NATURE-INSPIRED
SOLUTIONS FOR A HEALTHY PLANET.

BIOMIMICRY PROGRAMS



YOUTH
EDUCATION

BIOMIMICRY GLOBAL
DESIGN CHALLENGE
& LAUNCHPAD

ASKNATURE

OUR THEORY OF CHANGE

We envision a world in which human design is as good and regenerative as nature itself. Here is how our programs are getting us there.

ACCESS: *Learning nature-inspired design should be accessible to all. That's why we provide high quality materials and services for learning, teaching, and practicing biomimicry.*

PRACTICE: *Biomimicry is a science AND an art that is best learned by doing. We provide a platform for students and entrepreneurs to practice nature-inspired design with real-world applications.*

SUPPORT: *Around the world, researchers and entrepreneurs are creating sustainable innovations. We help them with mentorship, connections, prize money, and by telling their stories. These stories shift our culture.*

Project Drawdown identified the most substantive, existing solutions to address climate change. Out of the top 25 solutions, biomimicry can be applied to at least 15, including refrigerants, wind turbines, food waste, solar energies, and regenerative agriculture.

LEARN MORE:
www.drawdown.org/solutions

Biomimicry could account for \$425 billion of US GDP and \$1.6 trillion of total global output by 2030.

- **THE FERMANIAN BUSINESS
AND ECONOMIC INSTITUTE**

BUILDING A NEW GENERATION OF "BIO-LINGUAL" INNOVATORS



The 2018 Ray of Hope Prize® winner, Nucleário, demonstrates what each biomimicry enterprise is capable of achieving. Inspired by winged seeds, bromeliads, and forest leaf litter, the Nucleário device reduces seedling maintenance, offering a smarter, cheaper, and faster approach to large-scale forest restoration. They have had over 200 inquiries to buy their device, and are working with the World Wildlife Fund and local universities to conduct multiple tests of the technology. With the help of the Biomimicry Launchpad and \$100,000 Ray C. Anderson Foundation Ray of Hope Prize, their team is now closer to their goal of planting 2.5 million trees in five years. This approach could save 10 gigatons of carbon emissions every year by 2030 and solve a core challenge of reforestation and ecosystem restoration.

WITH YOUR SUPPORT



4,000+ KIDS
 — LEARNED from —
150+ TEACHERS
 ABOUT NATURE-INSPIRED DESIGN
 in the YOUTH DESIGN CHALLENGE



375+ MENTORS & ADVISORS
 — have SUPPORTED our —
BGDC & LAUNCHPAD TEAMS

2,484 PEOPLE
 FROM
51 COUNTRIES

HAVE PARTICIPATED
 in the
**BIOMIMICRY GLOBAL
 DESIGN CHALLENGE**



96 ENTREPRENEURS
 IN THE LAUNCHPAD
 — were trained in —
**NATURE-INSPIRED
 ENTREPRENEURSHIP &
 REGENERATIVE**
 — BUSINESS MODELS —

1.1 MILLION+
 PEOPLE ACCESSED
 — information on —
AskNature
 — IN 2017 AND 2018 —



BIOMIMICRY IS DRIVING A RADICALLY DIFFERENT APPROACH TO INNOVATION

The 17 Sustainable Development Goals (SDGs) were adopted by all United Nations member states in 2015. They provide a shared blueprint for peace and prosperity for people and the planet, now and into the future. The target is to achieve them by 2030, the same year the UN Framework Convention on Climate Change has identified as the critical deadline in making tangible progress in reversing climate change. Our Biomimicry Launchpad participants from 2017-2018 show how teams from around the world are joining the effort to create solutions targeting multiple SDGs.

LAUNCHPAD TEAM

UN SUSTAINABLE DEVELOPMENT GOALS

	1: POVERTY	2: HUNGER	3: HEALTH	4: EDUCATION	5: GENDER EQUALITY	6: WATER & SANITATION	7: ENERGY	8: ECONOMY	9: INFRASTRUCTURE, INDUSTRIALIZATION, INNOVATION	10: INEQUALITY	11: SUSTAINABLE CITIES & COMMUNITIES	12: CONSUMPTION & PRODUCTION	13: CLIMATE	14: LIFE BELOW WATER	15: LIFE ON LAND	16: COOPERATION
ANSA: Autonomous Nutrient Supply Alternative, a multi-layer hydroponic growing system.		•	•			•	•					•	•			
Aruga Technologies: Surface design platform using wrinkles to renew and self-clean.			•			•			•			•		•	•	
B-All: an edible food packaging system.		•	•									•	•			
BioThermosmart: Thermal management system that harvests waste heat (from IT server rooms, boiler exhaust, etc.) and cycles it back into the system.							•				•	•	•			
Cooltiva: System that takes advantage of the wind and the sun to regulate temperatures inside city residences using minimal energy.							•				•	•	•			
CocoPallet: 100% bio-based and fully circular Export Pallets made from Coconut Waste.	•							•	•			•	•			
Digital Naturalness: Blockchain smart contract templates for greater diversity, resilience, and healthy productivity in global supply chains.	•							•		•		•				•
EcoSTP: Eco-friendly sewage treatment, inspired by the four chambers of a cow's stomach.			•			•		•	•		•	•			•	
extraCTION: Carbon-scrubbing and filtering panel system.			•						•		•	•	•			
Full Circle: Nature-inspired energy generator that produces clean renewable electricity from underwater sea currents.							•		•		•	•	•			
Gen-Rail: Design to harness wind generated on urban freeways and convert it into energy, essentially creating a wind farm in an urban environment.							•		•		•	•	•			
HABARI: Barrier against weather to protect crops. Customizable, open source DIY-toolkit and a global smart database allow users to source local, sustainable materials, and adapt the design to a wide variety of crop types and growing conditions.	•							•		•		•	•			
NexLoop: Capturing, storing, and distributing rainwater for urban growing.		•				•			•		•	•				
Nucleário: Inexpensive, rapidly deployable approach for large-scale forest restoration.													•		•	
Phalanx Insulation: Panel system applied to exterior of buildings to provide passive interior cooling.									•		•	•	•			
Portunus: Sustainable production of chitosan, an eco-friendly substance that boosts the innate ability of plants to defend themselves against fungal infections.		•	•									•			•	
Psephurus Air Cleaner Equipment (PACE): Solar-powered air-cleaning device incorporated into signage on city buildings.			•								•		•		•	
Refish: Affordable, easy to mount device that removes PM 2.5 (particulate matter) from the air.			•						•		•	•	•			
RootLink: Self-organizing system to connect urban farmers with users, reducing greenhouse gas emissions from food transportation.		•	•					•			•	•	•			
Share-EET: Social experiment events to shift attitudes on food waste.		•									•	•	•			
Slant: App allowing people to share food source information.		•	•	•			•	•	•			•	•			
Soil Erosion by Nature: Retractable mesh structure to combat soil erosion.									•				•		•	
UPOD: Environmentally friendly, self-sustaining, reusable and affordable mosquito-control device.			•			•							•	•	•	
WatchTower Robotics: Bio-inspired robot to detect leaks in water pipelines.						•					•	•			•	
WindChill: A non-refrigerated food preservation unit.	•	•	•				•		•		•	•	•			

BIOMIMICRY YOUTH DESIGN CHALLENGE

*Encouraging students to
think in wild new ways*

ABOUT THE BIOMIMICRY YOUTH DESIGN CHALLENGE

We launched the Youth Design Challenge because we know that the only way to ensure that the innovators of tomorrow know how to “ask nature” for sustainable solutions is to teach them how today. The YDC is a hands-on, project-based learning experience that challenges middle and high school students to design bio-inspired solutions to fight climate change. It gives classroom and informal educators a framework to introduce biomimicry to students, providing a great context for E-STEM learning, and an interdisciplinary lens on science, engineering, and environmental literacy.

LEARN MORE:

youthchallenge.biomimicry.org

STUDENTS INNOVATE AND LEARN WHILE COMPETING IN THE BIOMIMICRY YOUTH DESIGN CHALLENGE

When two students in Kirstin Bullington’s engineering class decided to take on the challenge of designing a more efficient solar panel, they looked to a seemingly unlikely source for inspiration—the oriental hornet. These students—both seniors at Richland Two Institute of Innovation, a student innovation center for public high school students in Columbia, South Carolina—impressed the Youth Design Challenge judges and were awarded first place in the high school competition of the Challenge.

After researching a wide range of living organisms, the Richland Two students discovered that the oriental hornet is a marvel of sustainable energy generation. It is able to capture sunlight and, via its outer layer (or epicuticle), convert it into electrical energy. The team first tried to mimic the hornet’s epicuticle color, putting filters over solar panels. This ended up restricting light, so they did more research and shifted gears. Their second approach was

to mimic the shingle-like surface texture of the epicuticle to build a solar concentrator.

“The first time they tried their [new] prototype, they thought, ‘oh my gosh, it works!’,” said Bullington. “My students blew me away. They always amaze me and come up with better ideas than I could ever come up with.”

“While my initial goal was for [my students] to apply their creativity and problem-solving skills to developing a solution, they gained so much more in terms of appreciation for biological strategies and a greater understanding of the inherent complexity of climate change,” said Bullington. “More importantly, designing a working prototype empowered them to believe that they are capable of making a significant contribution towards reducing the effects of climate change.”

YOUTH DESIGN CHALLENGE IMPACTS

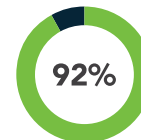
In 2018, Our **Youth Design Challenge** pilot engaged **54 TEACHERS** AND MORE THAN **600 STUDENTS** -- **50% OF WHOM WERE GIRLS.**



of teachers said it had a **positive impact** on their students’ interest in **nature and sustainability**



of teachers report it has a **positive impact** on their students’ interest in **learning STEM concepts**



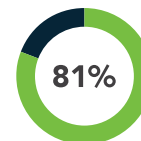
of teachers said it had a **positive impact** on their students’ **sense of agency**



of students said it **improved their knowledge** of how to use scientific information to **solve problems**

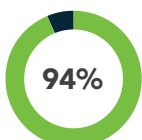


of teachers reported a **positive impact** on their students’ development of **critical thinking skills**



of students said it helped them believe they can **make a positive difference in the world**

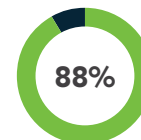
The **Biomimicry Youth Design Challenge** also benefits teachers and improves their ability to teach **environmental education and STEM** to students:



said their participation in the program helped them **teach science concepts and processes**



said it **improved** their ability to **teach engineering**



said it helped them to **implement design challenges** with their students

2018 STUDENT WINNERS *Middle School*

1st **SUNTILE**

Punahou School, Honolulu, HI
First place, middle school category



Photo: Ester Inbar, CC BY - Creative Commons

This team looked to the Saharan silver ant’s ability to reflect light, the desert scorpion’s ability to withstand sandstorms with its erosion-preventing exoskeleton, and the honeybee’s hexagonal honeycomb shape to create the SunTile. This innovation fits on roofs in a hexagonal pattern, and is covered in grooves to withstand erosion and microscopic prisms to reflect the sun, creating a long-lasting, sustainable way for desert homes to stay cool.

“Knowing you have done or made something that could save or help someone’s day is probably one of the best feelings in the world. We also enjoyed learning about all of the special talents of animals around the world. From water storage to withstanding pressure, living things are truly the most amazing things on this earth. We are really glad we entered into this competition, because it really helped us learn a lot about ourselves, biomimicry, and why it is important to conserve nature.” - SunTile team

2nd **COOLEST BUILDING ON THE BLOCK**

Wilbur Wright Middle School, Munster, IN
Second place, middle school category



This team wanted to create a better way to cool computer rooms, which generate a lot of heat. After studying how jackrabbits use their ears to stay cool in extreme heat, they developed a pipe system that uses flowing water in order to cool computer rooms without the use of HFC-spewing air conditioning units.

2018 STUDENT WINNERS *High School*

1st

TEAM HORNET

Richland Two Institute of Innovation, Columbia, SC
First place, high school category



Photo: Markopoulos
 CC BY NC ND - Creative Commons

This team wanted to develop a more efficient way to produce renewable energy, so they created a device to reflect and concentrate UV rays on solar panels, based on the oriental hornet's ability to generate electricity from sunlight with its exoskeleton.

2nd

KIMHEAMTEAM

Woodbridge High School, Irvine, CA
Second place, high school category

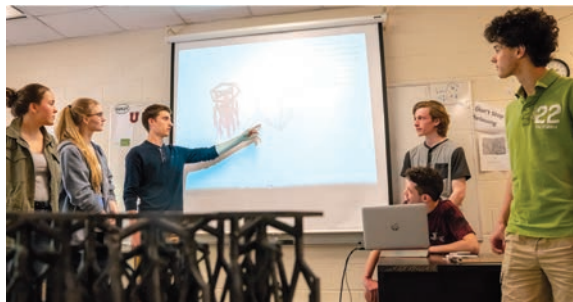


This team's design harnesses wave energy—an underutilized energy resource—by using strategically-placed piezoelectric kelp-inspired blades that translate the bending movement of blades into electrical charge. They also studied how schools of fish conserve energy by moving in certain flow patterns to learn how best to place these kelp blades to maximize their energy-generation potential.

3rd

huMANGROVE

The Harley School, Rochester, NY
Third place, high school category



This team mimicked the roots of mangrove trees to create a quickly-deployable structure to battle coastal erosion. Their solution is designed to be implemented and removed as needed and to have limited impacts on the ecosystem, since water can still flow within the structure.

This team's project won an Environmental Innovation Award from the Seneca Park Zoo.

BIOMIMICRY GLOBAL DESIGN CHALLENGE + LAUNCHPAD

*Nurturing a new species
of entrepreneur*

ABOUT THE BIOMIMICRY GLOBAL DESIGN CHALLENGE + LAUNCHPAD

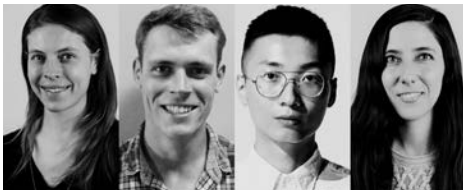
We're committed to supporting a new kind of entrepreneur - one who can deploy nature-based solutions that give more than they take. Our annual Biomimicry Global Design Challenge, sponsored by the Ray C. Anderson Foundation, provides an opportunity for university students and professionals to practice biomimicry in action. It also provides a pathway to bring the resulting designs to the next level through the Biomimicry Launchpad, an accelerator program for early-stage biomimicry entrepreneurs that helps them further develop their design concepts and market strategy with business training, mentorship, and legal support. Each year, Launchpad teams compete for the \$100,000 Ray of Hope Prize®.

LEARN MORE:

challenge.biomimicry.org
innovation.biomimicry.org/launchpad

LEARNING BIOMIMICRY IN ACTION WITH THE GLOBAL DESIGN CHALLENGE

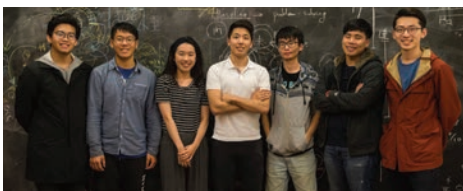
The Challenge gives students and early-career professionals the opportunity to learn and practice biomimicry by applying nature-inspired design to create climate change solutions. Below are examples of three teams who entered the Biomimicry Global Design Challenge in 2017 and 2018 as part of their university studies and were later invited to join the Biomimicry Launchpad to work towards bringing their designs to market.



UPOD A team of graduate students from Cornell University's College of Human Ecology developed the UPOD, a mosquito-control device inspired by the mechanism of the carnivorous *Utricularia vulgaris* plant. UPOD can help individuals, communities and nations take control of larvae populations and prevent the spread of mosquito-borne diseases.



HABARI This University of Utrecht-based team created an automated, open-source design to protect tea plants from frost damage. Inspired by the giant groundsel (*Dendrosenecio kilimanjari*) and giant lobelia (*Lobelia deckenii*) plants, both native to Kenya, Habari increases farmers' resilience to weather conditions, and connects the farms with the local community by using local and sustainable products.



REFISH A team of students from the National Taiwan University developed Refish, a device that captures particulate matter - the kind of pollution that is so small and light that it remains in the air longer and can more easily settle into people's lungs, plants, and more - in an energy-efficient way. The team applied lessons from the filtering functions of African violet leaves and the oral cavities of fish to create a filter that is able to trap particulate matter without getting blocked.

**IN 2017-18,
THE GLOBAL DESIGN
CHALLENGE RECEIVED:**

163
ENTRIES

FROM
655
PARTICIPANTS

REPRESENTING
33
COUNTRIES

"It is a great experience to work with people who are not of your same profession, it helps to understand the strategies applied from many points of view and it amplifies the ideas of design to a more integrated and multidisciplinary vision."

- **JOSÉ AVILA** Participant; **Guatemala**

BRINGING BIOMIMICRY SOLUTIONS TO MARKET IN THE BIOMIMICRY LAUNCHPAD



2017 Ray of Hope Prize winner: Resilient urban farms, inspired by nature

Team NexLoop won the 2017 Ray of Hope Prize for their water management system for urban food producers, inspired by the way living systems capture, store, and distribute water. Since their win, they have spoken at conferences around the world, including the National Science Festival in Croatia and VERGE 18 in Oakland, and are focusing on developing a field-ready prototype. They will be launching their first pilot site on Governors Island, New York City, in spring 2019.



2018 Ray of Hope Prize winner: Restoring the Atlantic rainforest

In October 2018, the Ray of Hope Prize was awarded to Nucleário, a Brazilian team whose device nurtures and protects tree seedlings, reducing maintenance time so that the Atlantic rainforest can be reforested more quickly. With the help of the Biomimicry Launchpad and the Ray of Hope Prize, their team is now able to secure patents and get closer to their goal of planting 2.5 million trees over the next five years. They recently were profiled in a BBC news segment and have received national and international press coverage.

LAUNCHPAD ALUMNI HIGHLIGHTS

APRIL 2017

Evolution's Solution attends the invitation-only World Food Programme Innovation Accelerator in Bonn, Germany, as part of the World Food Programme / Singularity University "Food in Emergencies" Global Impact Challenge.

FALL/WINTER 2017

BIOcultivator selected to be part of the Women in Tech Forum at PIONEERS 2017 in Austria, and participated at the first CEE Founders' Summit.

FEBRUARY 2018

Hexagro is accepted to Singularity University's incubator program.

SEPTEMBER 2018

Hexagro joins the Ellen MacArthur Foundation's Circular Economy 100 collaborative.

DECEMBER 2018

LifePatch is shortlisted for the LushSpring Prize.

JULY 2017

Team Planet wins a Dubai 2020 grant to test the Mangrove Still - a desalinating still technology - in Egypt and India.

WINTER 2017/SPRING 2018

Planet teams up with LifePatch to jointly test their systems in a pilot in Cyprus.

MAY 2018

Two Biomimicry Launchpad alumni teams (Planet and BIOcultivator) are part of a consortium that won a €10 million grant from the European Union to demonstrate and test innovations that close water loops, feed the soil, and promote local economies.

DECEMBER 2018

Nexloop wins the Make It In Brooklyn "Innovator of the Year" award.

25
TEAMS

PARTICIPATED
IN THE
LAUNCHPAD

WHO WORKED TO CREATE:

- 8 ENERGY SOLUTIONS 2 WATER SOLUTIONS
- 7 AGRICULTURAL SOLUTIONS 2 PUBLIC HEALTH SOLUTIONS
- 6 CARBON CAPTURE/REDUCTIONS SOLUTIONS

"I am so grateful to have been part of this program, have access to such a wealth of resources and mentorship, and obtain the support needed to help accelerate our product launch."

-MEGAN HANCK *extrACTION*

ASK NATURE

*Your guide to thinking
like an ecosystem*

ABOUT AskNature

For over half a million people each year, AskNature is the place they go to find the blueprints for resilient design. As our planet's temperature rises, innovators need to have free and open access to nature's design solutions, not locked behind a paywall or hidden in an academic journal. AskNature is organized by functions -- for example how does nature adhere or filter or repel water -- making it user-friendly for designers and engineers.

This free community resource - a curated online library of over 1,700 natural phenomena and hundreds of bio-inspired applications - powers a community of solution seekers with time-tested strategies for creating design that is circular, regenerative, and resilient.

LEARN MORE:
asknature.org

AskNature's REACH

USERS



VISITORS
IN 2017 & 2018

VISITORS COME TO AskNature TO **EXPLORE, LEARN, TEACH, AND DO BIOMIMICRY**. THEY:

Discover unexpected sources of **inspiration**

Find **biological strategies** that correlate to existing **design challenges**

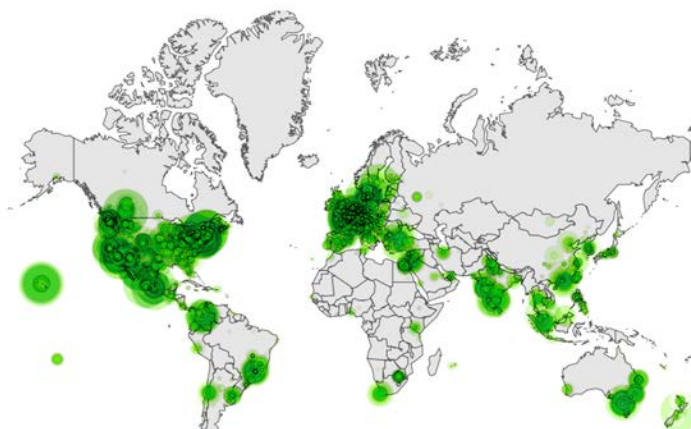
Collect **sources** of primary **literature**

Learn information about **biomimicry**

Find **resources** to help **communicate ideas**

Find **teaching resources**

AUDIENCE



SECTORS



CONTENT



Biological Strategies



Inspired Ideas



Resources



FINANCIALS

2017 FINANCIALS



- AskNature22%
- Design Challenges42%
- Education16%
- Fundraising.....10%
- Admin & Finance.....9%



- Grants.....69%
- Major Donors13%
- Individual Supporters...3%
- Sponsorships.....5%
- Earned Income10%

2018 FINANCIALS



- AskNature15%
- Design Challenges33%
- Education27%
- Fundraising.....15%
- Admin & Finance.....10%



- Grants.....69%
- Major Donors18%
- Individual Supporters...2%
- Sponsorships.....4%
- Earned Income7%

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YOUR CONTRIBUTIONS HELP OVER HALF A MILLION PEOPLE EVERY YEAR TEACH, LEARN, AND INNOVATE USING BIOMIMICRY.

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Lacey Ankenman	Laura Fain	Antonio Lozano Domenech	Marco Serra
Richard Austin	<i>in honor of Isabell Oliver</i>	Tiziano Luccarelli	Stephanie Sheldon
Richard Austin	Noa Falk	John and Norine Madden	Kathy Shimata
James Bacchi	Nicholas Franco	Mary Elizabeth Madden	Lynne Sopchak
Lisa Baffi	Mathis Garcia	Joel Makower	Frances Sowa
Mary Baird	Eva Garrett	Sunnihith Marepalli	Vincent Spahr
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Andres Batista	Tammy Gladwin	Tyrone Marshall	Linda Spencer
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Bob Bechtold	Laurel Gordon	Mary Ann Maruska	Evelyn Stanovici
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Anne Beswick	Julie Gyurgyik	Ian McNeel	Candace Stump
Zachary Binkley	Alex Haas	James McRae	Patrick Suen
Flavia Bisi	Marsha Hamacher	Sreenivas Menon	Susan Sullivan
Leéna Boone	Constance Hamilton	Emma Metwally	Giovanni Tedeschi
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Paul Brennan	Holly Harlan	Judith Mitchell	Carol Thaler
Robert Brown	Michael Kelley Harris	Brian Montgomery	Lynn Thorensen
Jody Brown	J Mike Hendrix	Inbar Morag	Juan Sebastian Tobon Conde
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Avril Buchanan	Toby Herzlich	Leanne Muir	Craig Toone
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Doug Demers	Athanasios Koutsianas	Emily Sadigh	Paul Wood
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Margaret (Peggy) Denney	Yafa Lamm	Ruben Sanchez Souza	Roger Yao
Astrid DesLandes	Moran Laniado	Ellen Sanford	Wilson Yik
Kym Donovan	Caroline Laub-Halfen	Dinesh Sarvodey	Margaret Yole
Darja Dubravcic	Diana Lee	Marsha Scheppeler	Prof. Dr. Donald York
Olivia Duncan	Judith Leitch	Karen Schneider Brodine	Brenda Young

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