

BioLearn Secondary Schools Challenge

Judging Criteria

Each entry will be assessed against the following criteria.

- Applying biomimicry (evaluated through teams completing evaluation wheel and accompanying questions) – 25% weighting.
Question: which biomimicry principles have you used and how have you applied them?
- Creativity (are teams copying what they find online or are they rethinking these for their context, or creating something original?) – 20% weighting.
Question: have you created a new solution to an existing challenge, or used existing ideas in new ways?
- Context and relevance (does the solution take into account and work with the situation?) – 20% weighting.
Question: explain how your solution works well in your situation; are there ideas you chose not to use? Why?
- Social and environmental benefits (is it worthwhile and can it make a significant difference) – 20% weighting.
Question: what social and/or environmental benefits does your solution provide?
- Presentation (is the solution clearly communicated) – 15% weighting.

Expert Panel

The final awards will be made by the BioLearn Challenge Expert Panel.

Sam Stier

Mr. Sam Stier is the Director of The Center for Learning with Nature, a non-profit effort providing curricula and professional development to teachers to enrich STEM engagement in the classroom through the fascinating world of biomimicry (innovation inspired by Nature). He is the author of *Engineering Inspired by Nature* (2014), an award-winning engineering curriculum for middle and high school students based on biomimicry, and *Engineering Education for the Next Generation: A Nature-Inspired Approach* (W.W. Norton 2020).



Trained as an ecologist and conservation biologist, Mr. Stier served for several years as an environmental consultant to the World Bank, The U.S. Peace Corps, The Nature Conservancy, Conservation International, and World Wildlife Fund International, and continues collaborating on conservation initiatives with the U.S. Fish and Wildlife Service and Department of Defense.

Mr. Stier is also a faculty member in the Whitacre College of Engineering at Texas Tech University, and on faculty at Otis College of Art and Design in Los Angeles, where he teaches Bioinspired Design.

He holds an M.S. from the School of Forestry and Conservation at the University of Montana, and a B.A. in Communications from Brown University. He currently lives in Montana, where daily the mountains beckon.



THE CENTER FOR LEARNING WITH NATURE

Bowine Wijffels

Bowine has developed the 'nature-Wise' approach based on biomimicry. She uses ecological processes and patterns as a resource and helps organisations with questions about collaboration in their business ecosystem, with effectively working in teams and operating in a changing environment and so on.

Bowine originally trained as a biology teacher and has been a consultant on sustainable development for 16 years. A few years ago she decided to use her background to support organizational and professional development in businesses, governmental organisations and NGO's. She takes a systemic view on organizations in their context and is able to connect the strategy mission to every day's practice and vice versa. Her inspiration comes from the natural world.



Bowine has participated in the course 'Biomimicry for Social Innovation' and is part of the global 'Biomimicry for Social Innovation' network in 2015 and in 2016. See: www.bio-sis.net. She is also an ambassador associated with Biomimicry NL; [Biomimicry NL](#)

