

Science House Foundation in Brazil - 2012 Transforming Cross-Cultural Collaboration and Science Education

Summary: From 2011-2012 Science House Foundation executive director Joshua Fouts began developing a series of multi-city partnerships in Brazil to explore how cross-cultural, globally collaborative informal science education could be applied across Brazil's diverse academic, scientific, governmental, economic, cultural and ecological landscape and subsequently integrated with Science House Foundation's worldwide network of schools, scientists, teachers and students.

"We approached our Brazil effort as a pilot program to determine if digitally networked, global collaboration around science education could transform lives and the educational paradigm," said James Jorasch, founder of Science House Foundation, "We were thrilled with what we discovered."

Approach: Consistent with Science House Foundation's philosophy and work, we evaluated each location based on its capacity for impact and need. We provided critically-needed science equipment -- such as microscopes, a part of Science House Foundation's *MicroGlobalScope* program -- designed to help teachers, and spark the imaginations of kids about the excitement of science. We connected each of these new partners to our global digital network of schools and scientist mentors.

Partners: The expansion included significant partnerships with a cross-section of governmental and non-governmental organizations. These partners include:

- *Laboratório Nacional de Biociências (LNBio)*, Campinas, São Paulo: LNBio is Brazil's largest bioscience laboratory.
- *Anhumas/QueroQuero*, Campinas, São Paulo: A local NGO that provides daily enrichment to children of Brazil's favelas.
- *Centro Yorenka Átame*, Marechal Thaumaturgo, Acre: A cultural education center for the indigenous Ashaninka people of Brazil's state of Acre.
- *The Ashaninka People*, Marechal Thaumaturgo, Acre: A federally

recognized indigenous tribe who live in the heart of Brazil's Amazon jungle in the state of Acre.

- *Jardim Zoológico*, Brasília, DF: Affiliated with Brazil's national zoo in Brasília, the Jardim Zoológico provides science education to the children of the city of Brasília.
- *Colégio Santa Marcelina*, Ipanema, Rio de Janeiro: A middle school in Rio de Janeiro.



Imagine points of light around the world, each representing a place for kids to study science.

Points of Science: As part of our outreach in Brazil, we created an umbrella term for this project called *Points of Science* (Pontos de Ciência in Portuguese). *Points of Science* is a vision to make science education accessible to all through the programs of Science House Foundation.

While we are in 25 countries now, our vision is to reach kids in every country on the planet. Our goal is to create centers of opportunity everywhere, just like the points on the map above, to get kids excited about learning science and create a desire to stay in school and go to college. Each of these *Points of Science* will be connected to each other through Science House Foundation's global online community, bringing-together, mentoring and hosting images, videos, discoveries, and comments from teachers, scientists and kids.

Unique Partnerships: After setting up relationships with key schools in Brazil we began a collaborative partnership with LNBio and a local NGO Anhumas/QueroQuero. LNBio assigned several of their lead researchers to spend part of their week teaching microscopy education to children of the favelas.

In May 2012, Fouts and a team that included LNBio biophysicist Dr. Ana Zeri, received sponsorship to deliver microscopes to the indigenous Ashaninka People in the heart of the Brazilian Amazon jungle. Their mission was four-fold:

1. To teach the Ashaninka adults about the importance of science education;
2. To get the Ashaninka kids excited about studying science;
3. To educate them and evaluate the impact of climate change on their community; and
4. To connect the kids to Science House Foundation's digital network.



Dr. Ana Zeri teaches microscopy to Ashaninka elders.

Grants: Science House Foundation received support from the Invoking the Pause Foundation and the Richard Lounsbury Foundation in this effort. The Invoking the Pause Foundation sponsored the trip to the Amazon in May 2012.

Media coverage: Science House Foundation's efforts in Brazil were covered by major Brazilian news outlets, including Brazil's largest paper, *Folha de São Paulo* and *Galileu*, Brazil's largest science magazine. Science House Foundation executive director Joshua Fouts wrote an invited essay in *Nature Magazine* describing the project.

Impact: The outreach program to Brazil resulted in several exciting transformations.

1. Cultural collaboration as an incentive for literacy. Within a few short weeks of introducing a microscopy science

curriculum to children of the favelas we not only sparked the kids' interest in science, we also discovered that informal, globally collaborative microscopy science education was a gateway for literacy. Many of the favela kids we worked with were illiterate. Their daily lives include gangs, drugs and prostitution. The kids' desire to share their scientific discoveries and describe them, on Science House Foundation's *MicroGlobalScope* website, was so strong that they asked to be taught to read and write.

2. The Ashaninka People agreed to send kids to study science in college. In an interview conducted with Ashaninka chief Benki Piyãko, the chief agreed that he would encourage a few children to study science in college to help them defend against and better understand the impact of climate change on the region.
3. Expanded collaboration. As a result the successful Amazon expedition, Science House Foundation has been awarded a new grant and is now in the process of collaborating with a team of Brazilian anthropologists and game designers at the University of São Paulo on the creation of an iPhone/iPad app about science education and the Amazon.

About Science House Foundation: Science House Foundation is a New York City-based 501(c)3 charity founded in 2008 by James Jorasch. Our mission is to spark the imaginations of kids worldwide -- especially urban and disadvantaged youth -- about the excitement of science and mathematics education in an effort to help them develop leadership skills, stay in school, and create viable 21st Century jobs skills. Our method is to provide equipment to teachers and students and connect them to our global network of scientists, teachers and students. In this we instill in kids a belief in collaboration, mentor teachers and create a lifecycle of education.