



THE 2018 LAB ANNUAL THEME

HUMANS:

INCORPORATING OURSELVES
INTO NATURE

For LAB's inaugural theme, we have chosen something that resonates with what LAB is all about. Learning Across Borders is a program that brings students and teachers together to think, present, and discuss environmental issues. When you think of nature, what do you think about? Perhaps forests or the ocean? Maybe polar bears or elephants? But did you think about humans?

Humans are an integral part of nature. We live alongside nature. We constantly interact with nature. We use nature in our everyday lives. And as we have done for thousands of years, we are changing nature.

Why should we study humans? The world is extremely large and diverse, and within this world are many complex systems. We have only started to begin to understand how different organisms interact with their surroundings and our role in these interactions. Yet humans are interconnected with the world around us and you, as a human, are a part of this too! As we face increasingly more environmental challenges, you can also be a part of the solution. With this in mind, we have decided to focus all LAB projects this year on humans.

To help demonstrate how much humans affect the world and the variety of projects that are possible with this theme, here are three different project examples:

Team A: I really like tomatoes - they're my favorite fruit! When I go with my mother to the market, there are tomatoes of all different sizes. This made me think - do tomatoes that are bigger have more nutrients? I decided to do a project with my friend where we compared the levels of Vitamin C in tomatoes of varying sizes by conducting experiments. With the help of our teacher, we used our school's lab and chemistry equipment. People typically prefer to buy bigger fruits, but this project aims to instead help people buy more nutritious food. We also might continue doing research to compare different varieties of fruit, or maybe even to consider testing tomatoes that are genetically modified.

Team B: My partner and I are from Southeast Asia and live near a river that used to have large mangrove forests. Mangrove forests are almost like small islands that are formed by mangroves trees that grow densely together in shallow, brackish water. Mangrove forests have been gradually disappearing and we wanted to know whether this would cause problems in the future.



Perhaps this is also because of the changing river quality. We met with local scientists who told us that as mangrove forests disappear, the river ecosystem and wildlife will be negatively affected. We hope to meet with fishermen from a nearby village and ask if they have seen any changes. We also plan on conducting experiments with water taken from different sections of the river to understand how mangroves grow in the sections of the river near human villages and the areas farther away.

Team C: We were really inspired by a recent event that happened: the completion of the three-year journey around the world of the Hawaiian canoe voyager, the Hokule'a. Nowadays, there is a large focus on the role of technology, but the term 'science' can include more than just that. We thought it would be interesting to learn more about what it means to use the stars and other aspects of nature as navigational tools. For this research, we incorporated various disciplines, including history, astronomy, and geography. We hope to be able to meet with and talk to people who have been a part of the Hokule'a's voyages and hear directly from them in addition to other sources. With this knowledge, we also want to apply it to different areas, such as how animals use similar features of nature during migration patterns.

Each of these three projects are on very different topics and take different methodologies to understanding their topic. But what makes each of them successful is their attempt to move beyond information that can be found in books or online and access the wealth of information around them. This can be done by doing your own experiments or meeting with local experts or with the people directly involved with your topic. Even your parents or grandparents could be sources of information for ways that people have traditionally responded to environmental problems or situations in your community. So much can be learned from the people around you. We are all inspired by the world around us. We all live alongside and interact and affect nature.

Now that you know the theme for this year, it's time to start! When approaching a topic as broad as environmental issues and humans, it's always good to start with yourself. What are issues that you're interested in? What are you confused by? What do you see around you? Choose a topic that you're interested in and want to learn more about. Then, after conducting basic background research, go outdoors! Meet with local scientists, people in your community who know about the issue, and gain as much knowledge as you can. Conduct your own experiments and discover information on your own.

The important thing is that you take a critical approach and use primary research methods in approaching and addressing your research project. Have fun learning about the world around you and how humans play an essential role in it. Then create a presentation so that you can share your findings with us and other students. By bringing all the projects together at regional and Global LABs, we will also be able to see different instances of human interactions with nature and perhaps some connections between different projects. We can't wait to learn what you all conclude about how humans (and that includes you and us!) are living as a part of nature!

