Imagine a hot, humid rainforest almost 100 miles by river from the nearest developed town, with no roads, cell phones, or stores. Pink river dolphins cruise by under the wings of macaws and orendulas. Palm sized tarantulas, giant millipedes, and whooping frogs can march into your home at will, and the rains batter your thatched roof daily. Nothing is safe from moisture or the minuscule life forms that thrive on it. The air is so humid that natural materials dissolve or break down in a matter of days or weeks. Each towering tree shades you and shelters dozens of other plant species, thousands of insect varieties, and many birds and frogs. Imagine surviving off only what you can find or grow, without any refrigeration to store food for later. Although the rainforest naturally produces great diversity, if you decide to plant crops, only a few will thrive in the constant heat and nutritionally bankrupt soil. Hunting and fishing are essential to survival. The Amazon River and the rain are the only significant water sources. For people who live along the Amazon, Napo, and other tributaries, the river is everything. It is a highway, supermarket, a source of cleaning and drinking water, and a great danger as it can flood villages and submerge crops, as well as cause illness when people drink it directly.

Continued on pages 10-11
The EcoTeach 2015 Educator Academy in the Peruvian Amazon took a group of 25 teachers from around the United States, seven tropical ecology professors and scientists, and three incredibly knowledgeable local guides on a journey along the Amazon and Napo rivers. By the end of my time in the field, I was left with a sense of awe, and many more questions than answers. We conducted inquiry studies, attended ecology lectures, held giant insects, visited local shamans and plant medicine gardens, danced to handmade drums, and walked day and night 100 feet above the forest floor on a canopy walk.

While we stayed in remote lodges with classrooms and sleeping rooms, we made several excursions into communities of the local indigenous people, the Yagua. The Yagua wear modern dress and most speak Spanish, yet they still practice traditional hunting and farming, music, medicine, and religion. We spent a day in a Yagua community, working alongside local people to fix up the one room school that had been closed for a month after being flooded by the river. We also visited a project initiated by the NGO CONAPAC, including a public environmental library and a simple drinking water treatment system.

My experience at the Educator Academy brought to light how much science teaching depends on the places where we find ourselves. Virtually all that I know about ecology, about life, weather, and even about society, is wildly different in the Amazon. Weather doesn't move like it does in New England; it is a cycle that happens in place, nutrients are not in the soil, but in the trees, and creatures I am used to thinking of as tiny are enormous. People live not necessarily in harmony with nature, but certainly in societies completely inextricable from the natural world. I tried for months to prepare myself mentally for the trip and found it was hard to imagine. Now that I have returned, I understand why.

Of all of my experiences in the Peruvian Amazon, what has stirred me to the point of sleeplessness was visiting people whose lives are so inextricably linked to the natural world that almost everything I work for at home would be a moot point. Disconnection from nature, a lack of knowledge of local plants and animals, reliance on manufactured products and processed foods, none of these are even an option in the tremendous Amazon basin. The ideas of separation of work and life, of religion and science, and of people and nature, would all seem bizarre to the Yagua people. When we helped repaint a school damaged by river flooding, every person in the community, down to 3-year-olds, helped until we were
done, and danced to celebrate the work. The shamans, in possession of profound scientific knowledge about the properties of local plants and their uses, talk always to the spirits in trees in order to learn from them. There are no separations when life depends on all the human and natural community around you.

My teaching will be profoundly impacted by my experiences in the Amazon. Now, when I teach studies of climate, sustainability, and ecology, I will have a new perspective about how much development affects our own climate, food, and lives in general. Because Amazon people and nature are so closely linked, it is easy to see and understand the direct impacts of unsustainable behaviors. Water pollution threatens human health immediately. Clearing the forest responsible for the wet, productive climate quickly changes the weather and makes it impossible to grow crops.

I am excited to implement what I learned to deepen the CFS eighth-grade study of watersheds and the links between human lives and water quality. I am looking forward to having students experiment with water filtration methods and study how the ecology of the places surrounding our field sites impact the water chemistry. While we will make some comparisons to how water and nutrients cycle in the Amazon, CFS students will study how our own place and its resources work. As the ecology and earth science of each region of the world differs, it is not enough to learn these concepts in theory, from a book alone; we must apply the concepts through field work, get into our own water and collect samples, follow streams and visit water plants, and talk to community members. The re-designed water unit will build an awareness of the dynamics of how our water moves through weather, land, and people to inspire a more intimate relationship with and lifelong stewardship of our planet.

Author’s Note: I apologize for and acknowledge the real possibility of some inaccuracies in my reporting. I was merely a visitor for a short period of time and gathered as much information as I could about life in the Amazon. The article above is based on my observations, conversations, and readings. And, I would like to thank EcoTeach and Cambridge Friends School for making it possible for me to attend the 2015 Educator Academy.