

Think Locally; Explore Globally

An exploration in the Amazon gives teachers deeper global and local connections



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AS THE SUN SINKS below the treetops, the hum of an outboard motor becomes audible over the cacophony of jungle sounds that signal nightfall in the Amazon. Moments later, a small boat pulls into view and 28 educators from the United States clamber into the humid twilight at river's edge. Gazing up at the rainforest, most are unaware they are about to be transformed – personally and professionally – through their deep exchange with this place called the Amazon.

For the next nine days, the Amazon will serve as teacher, mentor, and guide – equipping these educators to return to their classrooms with new perspectives on how to help their students make sense of their world. Learning in the Amazon favors inquiry, personal discovery, and the ability to ask good questions. It requires a holistic, multi-disciplinary lens to understand its complex past, present, and future. Its preservation calls for local engagement and global collaboration.

But is it really necessary to travel thousands of miles by plane and boat to reach a remote field station in the rainforest to accomplish this? After all, one of the most basic tenants of place-based education is to focus on the local rather than on distant places like the jungles of South America. This article will explore how an experience in the Amazon serves as a

touchstone to better understand one's place in the world.

The mere mention of the word Amazon conjures up images of snaking rivers and strange wildlife or “Save the Rainforest” t-shirts and fundraisers. The Amazon, the world's largest rainforest, shelters more than 10 per cent of the planet's known biodiversity, with new species still being discovered at the rate of one every three days. Its rivers and tributaries account for more than 15 per cent of the world's fresh water and its forests store more than 90 billion metric tons of carbon. To say that the Amazon is a critical global resource is simply an understatement. These facts are brought to life for educators as they explore and experience this vital ecosystem for themselves.

But is that enough? One still might question how this first person experience with the Amazon translates into changes in instruction once the educators are back home. How does it provide educators with the transferable skills and new understandings needed to successfully forge global connections for their students?

For the last four years, we have been seeking answers to these questions via the Educator Academy in the Amazon, a unique place-based professional development experience for K-12 educators set in a remote corner of Northeastern Peru. As we hike along rainforest trails, engage with local communities, and traverse the rainforest canopy, we use the principles of place-based education to explore, engage, and understand the Amazon and its connection to our home



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place. Through this intensive, coming-to-know experience, we uncover universal understandings about the complexity and vulnerability of ecosystems and how they connect to one another.

While each day in the Amazon brings a full itinerary of exploration and engagement, there are two experiences that we think best illustrate the power of the Educator Academy. The first example speaks of the richness of place when used in the design and implementation of a STEM lab; the second illustrates the importance of human interaction and service in forging a personal connection with a place.

A STEM Lab in the Jungle

It's 8:00 PM. The jungle is well past dark and very noisy as arthropods and amphibians begin their nocturnal serenades. The participants are assembling in the classroom of the Amazon Conservatory of Tropical Studies (ACTS) for a session with its director, Dr. Steve Madigosky, for a STEM lab, Amazon style. The classroom is a large open room separated from the jungle night only by screens and a thatch roof made of palm fronds. And one light bulb. The group gathers around wooden tables and some participants haul in chairs from the dining room. You can tell from their body language that participants are tired from an exhilarating day of

"My overall experience in the rainforest has allowed me to assume the role of a student and learn from mentors and colleagues. It has allowed me to experience science in a way that my students may experience it, giving me the opportunity to put myself in their shoes."

– Alessandria A.

hiking and experiencing the canopy walkways for the first time. It feels more like midnight and it shows.

Dr. Madigosky's research focuses on the association between vertical microclimates and localized floral events in the Amazon rainforest,

not exactly an "edge of your seat" topic for a late night workshop. But he explains, with great enthusiasm, the problem that has been keeping him up at night: how to protect a series of small expensive sensors, strung at various heights in the rainforest, when you have no budget and are more than a day away from the nearest hardware store.

His challenge to the weary educators: design an inexpensive and ingenious "housing" to protect dime-sized abiotic sensors to eliminate the influence of wind, rain, and sun on the data - using only the items he managed to pack in his small suitcase (plastic cups, reflective insulation blankets, aluminum foil, metallic tape, velcro, along with assorted odds and ends).

As soon as the challenge is presented, the energy of the room shoots up! The level of engagement becomes electrifying. Soon all participants are drawing, brainstorming, and laying out blueprints of designs.

After an hour no one shows signs of stopping. As faculty, we are awestruck watching the exhausted educators become students – fully immersed in the process. Time stops as they

discover for themselves how engagement and excitement increases when learning is purposeful, meaningful, relevant, and tied to place.

When they return to the lab the following morning, Steve announces that the schedule has been changed to give them the opportunity to build and test their designs in the canopy. The group with the best results will be cited in his research – photos included! The rest of the morning is spent putting designs into action and building prototypes.

The transformative power of this STEM experience is that it emerged directly from the place where the learning was situated. The groups use their newly acquired understanding of the rainforest to inform their designs. At every junction it models how educators can engage their students in actual, purposeful scientific endeavors. Perhaps even more importantly, it allows the participants to fully experience the inquiry process just as their students do.

“We are all one family.”

It’s 8:30 AM. As our boat approaches the steeply eroded riverbank, we see a group of children and several adults playing drums and flutes to signal our arrival. Cynthia Smith Snyder from CONAPAC, a Peruvian non-profit, climbs down the steps carved into the river bank to officially welcome us to the village. We have come to spend the day working on their school that was recently impacted by the river’s annual flooding. The walk from the riverbank to the school is challenging. Deep sticky mud tracks our footprints. Soon the river itself is nowhere in sight but we have yet to encounter truly dry land.

We walk for ten more minutes past scattered homes on tall stilts. The enormity of the Amazon’s annual high water season begins to set in. We are at least a third of a mile from the river’s edge and the flood line, visible on tree trunks, indicates that the recent flood water level was over five feet high. We finally reach the small village of Nuevo San Juan and even here there is evidence of high water. The flood waters actually lapped at the floorboards of the school – elevated four feet off the ground.

The entire community of Nuevo San Juan has turned out to celebrate our arrival. They greet us warmly and show us into the one-room school. The Mayor welcomes us saying, “We are all one family. Thank God that you are here.” Community members give speeches and we begin to realize that our visit is a very big deal. Then, children of all ages spill into the middle of the room, wrangled into a cluster by their teacher. They sing, “Como esta mis amigos, como esta?” and we respond, “Muy bien!” They are excused and run, giggling, back to their chairs. Emily, a bubbly, dual-language teacher from California asks permission to lead a song with the children. Back they come, eagerly joining her in singing a song about an elephant. Elephants in the Amazon? No problem! The children clearly know the song and effortlessly add arm motions. No language barrier here. Soon everyone is joining in and our joyful work day with the community of Nuevo San Juan begins.

Our tasks are laid out and we are organized into groups – painting the interior of the classroom and the exterior walls of the school; screening the windows of the kitchen; digging a large hole behind the toilets for the composter; and finishing up the plumbing for the bathroom. There is a clear sense



Nancy Trautmann

of excitement from the participants and readiness from the community. Relying on the resources provided by CONAPAC, the community, and Academy participants, we get to work. We bridge the language barrier with smiles and hand gestures and make miraculous progress!

This place-based experience is not without challenges. We see the obvious disparities between us and them. We arrive with expensive gringo gear and are greeted by community members wearing donated hand-me-down clothes. We reach for our water bottles in the hot, humid heat and realize there is no community tap with which to fill them. We see the realities of subsistence life in the Amazon where everything is recycled, reused, and repurposed as a matter of necessity rather than novelty. We stand in the one-room schoolhouse with minimal supplies and consider our classrooms, brimming with resources. We marvel at the resiliency of this tiny Amazon community and its commitment to educating its children – despite rising waters that threaten to wipe out the classroom each year. We wonder if we could thrive, let alone teach, under such conditions.

Nevertheless, we work side-by-side and as we do, we find ways to connect, despite the language barriers. The differences become less stark in the light of the human connection built through smiles, laughter, and the shared work of restoring a classroom for another school year.



Kelly Keena

Before we say goodbye, one participant asks if she might paint a tree on one of the school's walls and in place of leaves, put hand prints. One by one, children, adults, and educators come to have their hand painted and then select their spot on the tree to place their print. This small gesture indicates the lasting bonds that have occurred between the community members and participants in the Educator Academy. As faculty, we once again witness the transformative power of place-based education to change perspectives and foment a holistic appreciation of one's place in the world.

Our nine days in the Amazon are filled with instances where learning emerges from the setting. Each experience is defined by the unique backgrounds and perspectives of the individual educators who have traveled here. The two examples given, one that immerses educators into the real-time dilemma of a climate scientist and another that introduces educators to the beauty and challenges of life in the Amazon, bring to life the types of experiences our participants describe as transformational.

Educators choose this journey. They choose to go thousands of miles from their familiar, local home into an environment that is in juxtaposition to almost everything in North America. We know that by fully immersing learners in a place, with all of the sensory channels wide open, not only does a relationship with the place form, but learning takes place. With the scaffolding of a strong curricular framework aimed at deepening content and processes in actual inquiry, personal understanding of the place becomes a personal understanding of what "I" want to know about it. We don't have to prescribe the questions. We only have to create the circumstances for those questions to come forward and the opportunities to begin to answer them. THAT is the process of inquiry, and that is the foundation of all learning - and place-based education. It is beautiful to witness.

"Just like that. In 10 short days our idea of a classroom has been forever changed. What a beautiful gift we have been given... To us, a classroom no longer consists of four white walls with organized

rows of desks and textbooks on top. Those walls have been broken and torn down. The desks have been pushed aside and textbooks are now closed. It's time to let the world be the classroom [O]ur job is to support students on their journey. Let them discover what the world has to offer and what they can do to make it theirs. – Alessandria and Erik, pre-service educators from the University of Northern Colorado, Center for Urban Education.

We return to the Amazon each summer because we know that if there is a place that can inspire wonder, curiosity, and transformation, this is it. As participants immerse themselves in this place called the Amazon they quickly come to the realization that they live in a world where local issues often have global impacts. It becomes clear that as educators, they have the ability and responsibility to help their students understand their roles as both local and global citizens. As a result, we leave the Amazon knowing that the real power of place-based learning is not always tied to a specific locale. Rather it is place-based education's ability to move learners beyond factual awareness and into active participation and deep understanding. This is where true transformation begins.

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