





### **DaNel and Carmen**

The most-voted runner up picture in the Photobooth of the ITEN 2022 Virtual Seminar Contest



These two educators focus on teaching teachers from all levels how to better engage students using STEM lessons. They mainly work for the Waters Center for Systems Thinking in Tucson, Arizona, U.S., but they also have worked directly and remotely with teachers in Tegucigalpa, Honduras, Tamazunchale, and Nogales, Mexico. As part of their efforts in STEM, they created the STEMAZing workshops with OAS-ITEN seed grant funds, with the goal of empowering early childhood educators with high-quality STEM lessons and supplies needed. To date, these workshops have supported around 50 teachers and over 3500 students.

Learn more about this dynamic duo and how they developed this amazing work in our interview below.



#### Why do you think STEM education is important?

STEM education is important because we desperately need students to be adept problem solvers and critical thinkers who understand how the world works. STEM literacy will allow our students to find solutions, modify systems, and engineer inventions, which will make the world a better place.

### **How do you promote STEM education?**

STEM education is our life's work. We promote STEM education through all the work we do with students and teachers to support their learning.

## Can you tell us about an important and significant project that you have already developed or worked on in education?

During Sep-Nov 2021, in collaboration with partners from the ministry of education in the state of Sonora, Mexico, we hosted a series of STEMAZing workshops. The purpose of the workshops was to empower early childhood educators with high-quality STEM lessons and all the equipment and supplies they would need to engage their young learners.

Through Seed Grants from the OAS-ITEN, and connections between government representatives of the US and Mexico, we were allowed to take the bags of supplies across the border and get them distributed to teachers. With these supplies in hand, we provided remote workshops.

And the feedback was really positive! The leading teachers communicated the great impact the lessons and supplies given had on all early childhood teachers and students of Sonora, Mexico. Hear in their own words here.

Inspired by the potential for impacting significantly more students, we requested additional Seed Grants from the OAS-ITEN to expand our work. Using our usual model of connecting STEM lessons to picture books, we designed a workshop series inspired by the Baby Loves Science books by Ruth Spiro. We used Baby Loves Gravity, Baby Loves Coding, and Baby Loves Aerospace Engineering. Tied with lessons we had on things that fall, tangible coding, and things that fly, we had an incredible time working with teachers who came from all over the state of Sonora, Mexico. Some traveled from more than four hours away each month to participate in the STEMAZing workshops.



The feedback each month from the teachers who participated was exceptional. They could not believe how much equipment and supplies in their STEMAZing kits received, which allowed them to immediately use all the lessons with their students. We have been truly inspired by their gratitude and continue to look for any funding that might support additional work with our colleagues in the future.

Approximately 50 teachers attended each workshop, impacting more than 3500 students.

This was an adaptation of the work we have done with previous seed grants and OAS-ITEN teams. From the first ITEN Project Team in English with Jamaica, Trinidad & Tobago, and Arizona, USA, we established and refined our early childhood STEM lesson plan template. We then worked for two years in Spanish with our team from Costa Rica, Colombia, Honduras, and Arizona, USA, refining and developing lesson plan templates, videos, and professional development for teachers, and even establishing a Facebook group called <u>STEM para niñ@s</u> which currently has over 2500 members.

# In your opinion, how can today's education educate for the future, and what type of teacher professional development is necessary to meet the needs of this education?

Providing teachers with continued support through STEM professional development is critical to meet the needs of today's complicated world. There is also an incredible amount of work to be done to acknowledge the work of professional educators, which is often marginalized and devalued. Empowering more teachers to become teacher leaders through programs supported by OAS and other institutions is a phenomenal place to focus efforts.

### What message would you like to send to other educators?

Don't give up doing what you do! It is making the world a better place. Let's stick together in this profession to make working conditions better for teachers and learning opportunities more equitable, accessible, and fun for all our students.