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Airmen 'wow' school children with science

By Susan A. Romano, AFTAC Public Affairs

PATRICK AIR FORCE BASE, Fla. – From Tesla coils to 3-D printers, vacuum chambers to infrared cameras, Airmen from the Air Force Technical Applications Center came armed with 21st century technology to showcase at Endeavour Elementary School's annual Math and Science Night Nov. 3, 2016.

AFTAC has been a community partner with Endeavour since May 2015 when the center entered into an agreement with the school to provide science, technology, engineering and math (STEM) mentors to the classrooms. As a Title I facility, the school receives funds to bridge the gap between low-income students



and other students to meet the needs of those at risk or living near the poverty line, but the funding stream is limited, which makes AFTAC's involvement even more valuable to the teachers and the students.

AFTAC participated in the event last year, and it was such a resounding success that Endeavour Principal Rachad Wilson requested to have the center's Airmen return again this year.

"We had probably the best turn out we've ever had in an after-school program at last year's Math and Science Night," said Wilson. "I wanted to capitalize on that success, and the best way to do that was to ensure AFTAC had their state-of-the-art science gear on display for our students to observe and learn from. This is a priceless partnership we have with the Air Force, and we truly appreciate the relationship and experiences they provide our babies and their families."

The nuclear treaty monitoring specialists demonstrated various aspects of science, illustrating how much radiation occurs in everyday objects; how airflow can affect the velocity and direction of a ball; how vacuum chambers work; how to operate a 3-D printers; and how fire plays a role in launching weather balloons, just to name a few.

The highlight of the evening came when Staff Sgt. Josh Hurtley demonstrated how a Tesla coil works. As the students and family members gathered in the school's cafetorium, Hurtley dimmed the lights and drew the crowd's attention to the stage where the Tesla coil was on display. He gave a quick explanation of what they were about to see, and ZAP! Bolts of high-voltage/low-current electricity lit up the room as the kids and grown-ups alike gasped and giggled. An added bonus was when Hurtley synched the coil's lightning bolts to music, much to the delight of the attendees.

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Shylin Helmick, a 2nd grader in Ms. Janelle Shepard's class, was practically uncontainable with excitement upon entering the cafetorium.

"Wow! This is so cool!" she exclaimed. "I just love science and I couldn't wait for this night to finally get here! I like being challenged and being able to learn more about science and experiments and fun stuff like this. It's all so scientific!"

Shylin's step-mom Oriana was thrilled at her daughter's exuberance. "Our kids have been talking about this event all week," she said. "As a parent, it's always exciting to see our kids



so enthusiastic and interested in both math and science. We really appreciate the Air Force being here tonight."

In January 2016, Endeavour Elementary School became Brevard County's first community school, and the first elementary-level community school for the State of Florida. The concept of the program is to form a partnership between the school and its surrounding community, pooling resources and integrating opportunities to strengthen and enrich the students' learning environment.

Endeavour's assistant principal, Christy Meraz, was quite pleased with the parent turnout and student interaction.

"Our goal for the Math and Science night is twofold – to bring the community together for an evening of fun, and to educate them on aspects of STEM that we may not have the time or resources to do so during regular school hours. I knew this year was going to be even more special because since the beginning of the school year, the kids have been asking when we're having Math and Science Night!"

She added, "One of the best parts of holding an event like this is that it brings us together as a community. The kids are so engaged by the innovation and they get so excited when they see the Airmen in their military uniforms. Their facial expressions say it all – their excitement, enthusiasm and enjoyment."

Maj. Michael Myers, this year's program coordinator, reflected on the work that went into planning and executing the event.

"Originally, the Math and Science Night was scheduled for Oct. 6, but it had to be cancelled due to Hurricane Matthew," said Myers. "A lot of us were very disappointed because we really look forward to meeting with the kids and showcasing what we do for a living at AFTAC. But the school was able to find another evening on the calendar, and here we are. I think the students and the parents were pretty fired up over our displays, especially the Tesla coil and the floating lantern. I can't thank all our volunteers enough for putting in the effort to help the kids of Endeavour. We've got a great team here."

Myers and his fellow Airmen hope to continue the tradition in the future.