



# AIR FORCE TECHNICAL APPLICATIONS CENTER

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## **Brevard Scouts earn Merit Badge with help from AFTAC Airmen**

*By Susan A. Romano, AFTAC Public Affairs*

**PATRICK AIR FORCE BASE, Fla.** – Boy Scouts from across Brevard County traveled here Oct. 22 to earn their Nuclear Science Merit Badge with the help of Airmen from the Air Force Technical Applications Center.

Eleven troops, 52 young men and 21 scoutmasters and leaders came to Patrick AFB early Saturday morning for a full day of immersion into the field of nuclear science.

The badge, formerly known as the Atomic Energy Merit Badge, is highly sought after by scouts, and is one of more than a hundred scouts can earn as members of the national organization that helps youth build character and become responsible and productive citizens.



Col. Richard Goodman, director of AFTAC's Ciambrone Radiochemistry Lab and an Eagle Scout himself, delivered AFTAC's mission briefing to the group, describing the center's worldwide nuclear treaty monitoring role. After listening to other presentations about nuclear science and taking notes in their scout workbooks – a critical part of earning the badge – the boys then went on to create some hands-on projects. The group constructed a 3-D model of an element and its isotopes using colorful jellied candies and toothpicks. From there, they built a cloud chamber made out of plastic Petri dishes, felt, black construction paper and fabric fasteners, which they later used to visualize the condensation trails left by ionizing radiation.

The scouts were given the opportunity to pose questions to AFTAC experts Dr. Alison Tamasi, Dr. Dan Mackney and 1st Lt. Joshua Hall, as well as respond to questions posed to them to get their creative juices flowing.

Troop 524's David Allaire, 14, deftly answered challenging scientific questions the instructors asked. The Viera High School freshman showed a genuine interest in the program.

"It is very important to understand all aspects of STEM (science, technology, engineering, math) to supplement what I'm learning at school," Allaire said. "I have a real love of science, and I learn so much more when I'm able to use my hands and apply what I'm learning. That's why I'm so excited to be here today because I know we're going to be doing hands-on experiments. If I can actually see how something works, it really helps me understand the concept."

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## 2-2-2 SCOUTS

After the boys completed the classroom aspect of the training, they enjoyed a barbeque lunch in AFTAC's outdoor courtyard before heading off to different areas of the center's treaty monitoring center.

Airmen showcased the center's radiochemistry lab, giving the boys the chance to tour a nuclear count room and a sample receipt room

Dylan Coney, an 11th grader at Odyssey Charter School in Malabar, came with his fellow scouts from Troop 323 and was serving as their senior patrol leader.



"This has been a really fun experience," Dylan said. "I am really interested in science, especially since I want to be a mechanical engineer in the future. But I'm pretty shocked at what a lot of these younger kids here today know about science. They already have knowledge about science that I'm just learning about now in my chemistry class – it's amazing!"

Mackney, a senior nuclear chemist with AFTAC, volunteered for the second year in a row to help the boys learn about nuclear science.

"I became involved in this program because I really enjoy helping kids," he said. "And I am consistently amazed at their level of knowledge and what they know. They have a grasp of concepts that I never even heard of until I was an adult! It's extremely rewarding to be a part of this great program."

Eagle Scout Cody Villarreal, a 16-year-old junior from Edgewood Junior/Senior High School, was particularly interested in earning this highly sought-after badge.

"I earned Eagle Scout when I was 15, but I still have my sights set on earning more Eagle Palms (awards earned for merit after achieving Eagle Scout), and being here today is going to help a lot," said Cody. "I'm very interested in nuclear science and I'm really looking forward to conducting all the experiments they have planned for us."

Hall, an AFTAC physicist, was the overall project officer for this year's program, and was pleased with the outcome.

"I have such a passion for my job and for science in general," he said, "so anytime I have the opportunity to share my passion with others – especially up-and-coming future scientists – I jump at it. I hope the boys had as much fun participating in our program as I did. I'm looking forward to being a part of it again next year."

Marc G. Filion, Scoutmaster for Troop 323 in Melbourne, was impressed with AFTAC's robust program they set up for the boys.

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### 3-3-3 SCOUTS



“This is a great opportunity for our scouts to participate in an event like this,” he said. “They’re being exposed to aspects of science on a military base that most of the general population never gets to see while getting to observe the work that’s being done at AFTAC. It’s a big deal for our group. In our troop, we held a lottery to see who’d get to attend since we were limited to just five slots. Believe me when I tell you the boys who are participating today are very happy to be here!”

AFTAC is the Department of Defense’s sole organization dedicated to nuclear treaty monitoring and nuclear event detection. This is the fifth year AFTAC has hosted local scouts to help them earn this merit badge.