

Taking to the Skies

STEM Club Students Help Restore Wings of Hope Airplane

By Tom Farmer
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CHARLES Richardson has taught thousands of students during his 17 years facilitating Pitsco Education STEM labs, the last six years in Lancaster ISD south of Dallas. And he's diligently explained

them ready. And if a kid thinks they can do something, guess what they do? They go and do it," Richardson said. "It's the same when we take them to competitions. We go to TSA (Technology Student Association). We go to Texas Alliance of Minority

2 p.m. for several months, a large group of STEM club members, under the watchful eyes of teachers and aircraft mechanics, worked on a Cessna 182 single-engine airplane at Lancaster Regional Airport.

"The kids took it all apart to get it ready to be refurbished. The engine was sent off to the engine shop," Richardson said. "Then when it came back, they put it all back together—wings and everything—to make it flight ready."



A dedicated group of Lancaster (TX) ISD STEM Club members spent a string of Saturdays working under the tutelage of teachers and aircraft mechanics, helping to restore a Wings of Hope airplane at the local airport.

to all his students how the labs can ignite a spark that eventually burns a trail to a satisfying and successful career.

But it's up to them to seize that opportunity as they explore and experience careers through hands-on activities.

"The lab is like a slingshot—it gets

Tom Farmer is communications manager, Pitsco Education, Pittsburg, KS.

Engineers. We do the National Society of Black Engineers. The reason I've taught this long is because I believe in the labs."

The Lancaster labs led to the creation of a STEM club for students in grades six and up. That group recently parlayed their hands-on skills into a project restoring an airplane used in Wings of Hope humanitarian missions (<https://wingsofhope.ngo/>).

Every Saturday from 10 a.m. to

Memorable—and Valuable—Experience

Not only did all students gain practical experience, but the females were able to disprove the preconceived notion that STEM and engineering are primarily a male's domain.

"It made me understand that this is not as hard as people made it to be for girls to do something like this," said Jaycee, a 10th grader. "You just have to get out there and try to learn it. It was like a once-in-a-lifetime thing because we got to do this through the school."

Jaycee's classmate Elizabeth chimed in, "It really does not matter if you are a girl or a guy, you are still a person. If you want to be a mechanical engineer, building planes or working on cars, you can do it."

Lancaster ISD's Executive Director of Academics and Innovation, Kyndra Johnson, said the labs have been key to opening the eyes of female and male students alike to the career possibilities that lie ahead. "Authentic learning activities in STEM subjects, coupled with

STEM Club students get the ultimate hands-on experience—the chance to work on a four-seat Cessna 182 single-engine airplane.



Spending time with professional aircraft mechanics helps build students' confidence, according to Lancaster ISD STEM Club sponsor Charles Richardson.

students' matriculation through our STEM labs is significantly important, not only in projects such as our recent aircraft build, but also in their future pursuits beyond graduation."

The Lab Advantage

Richardson's first foray with Pitsco was a Modules lab at the middle level, and for the past several years he has headed up a lab course titled Principles of Applied Engineering at Lancaster High School. The airplane restoration is the type of real-world project students need after they've had their STEM appetite whetted..

"I call this 'bridging to the future.' Let's go try this out. Let's do an

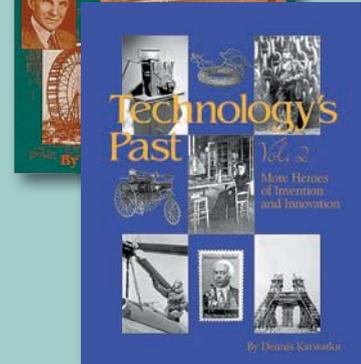
airplane project," Richardson said. "The confidence factor, knowing that they can achieve, communicate, collaborate, problem solve, and think critically—you don't gain that just anywhere. With the lab, you have an advantage. These labs are where kids gain the skills and abilities and knowledge to use their minds and their hands so when you take them outside the curriculum, they can do those kinds of projects."

The STEM club's success has even made it cool for students to be academically oriented, Richardson said. "You get all this working together, and then you have STEM kids running around the halls." 🎧



News footage of the plane in flight

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