Armstrong High School



Robbinsdale Area Schools 10635 36th Avenue North Plymouth, MN 55441 763-504-8800 | ahs.rdale.org

Lawrence Sagstetter % Air & Space Forces Association

I am honored to recommend Luke Becker for the Air & Space Forces Teacher of the Year award. Luke has made remarkable contributions to aerospace-related STEM education, profoundly influencing the lives of countless students. As an educator with a passion for innovation and exploration, Luke has consistently gone above and beyond to inspire the next generation of engineers, scientists, and thinkers in the field of aerospace.

One of Luke's standout accomplishments is his leadership in the NASA HUNCH program. Under his guidance, students have collaborated directly with NASA to design and fabricate real-world solutions for use in space exploration. These projects have not only given students a unique, hands-on learning experience but have also instilled in them a sense of purpose and confidence in their abilities to contribute to cutting-edge technology. Through his mentorship, students have developed prototypes, refined designs, and gained invaluable insight into the engineering process, preparing them for careers in STEM fields.

Luke has also demonstrated exceptional leadership in the Supermileage program, where he guided students in designing and building fuel-efficient vehicles. His efforts culminated in taking a team of Armstrong High School students to compete in the prestigious Shell Eco-marathon. This experience provided students with a deep understanding of engineering principles, teamwork, and the challenges of real-world problem-solving. Competing on an international stage not only showcased their hard work and innovation but also inspired them to push the boundaries of what they thought was possible.

Luke's efforts extend beyond the classroom as well. He has organized field trips to aerospace facilities, invited industry professionals to speak with students, and facilitated participation in STEM competitions. These opportunities allow students to see the broader applications of their learning and to connect with role models who demonstrate the diverse career paths available in aerospace. By fostering these connections, Luke has opened doors for students who might not have otherwise considered STEM careers.

The impact of Luke's work is evident in the achievements of his students. Many have gone on to pursue degrees in aerospace engineering and related fields, often citing their experiences in his programs as a defining factor in their career choices. Furthermore, the skills they have developed under his mentorship—critical thinking, problem-solving, teamwork, and innovation—equip them to excel not only in aerospace but in any field they choose to pursue. Through his dedication to aerospace-related STEM education, Luke Becker embodies the very spirit of exploration and discovery that defines the aerospace field.

Sincerely,

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Erick D. Norby Principal Armstrong High School



AIR & SPACE FORCES ASSOCIATION AEROSPACE/STEM TEACHER OF THE YEAR

ARTICLES



- VIDEOS
- <u>Student Spotlight on CCX from Supermileage Lucas Priem</u>
- <u>NASA Recognizes AHS Students for Space Station Innovation</u>
- AHS Students Fueled to compete in Global Supermileage competition
- Air Force Sno Cross Racing Team Visits AHS
- Mr. Becker "Let's Play Hockey" Minnesota FSA Association advisors Ag Day MN Wild Game
- Event honoring Luke Becker
- Education Minnesota
- Class at AHS puts students in touch with NASA scientists
- <u>Robbinsdale Area Schools Honored as NASA HUNCH Center of Excellence; Armstrong</u> <u>Students Advance to National Stage</u>
- Klobuchar honors Braham High School teacher for winning national Award
- Minnesotan named National Teacher of the year
- <u>Arnie Carlson Facebook Post</u>

Robbinsdale Area Schools Honored as NASA HUNCH Center of Excellence; Armstrong Students Advance to National Stage

Dec 16 2024

Robbinsdale Area Schools (Rdale) celebrated a momentous achievement on Dec. 11 as the district was officially named a NASA HUNCH (High

School Students United with NASA to Create Hardware) Center of Excellence. This designation recognizes the district's outstanding

contributions to NASA's project-based learning program, making it only the fourth district in the country to earn this prestigious title.

A Teacher's Dedication Recognized

The ceremony also paid tribute to Luke Becker, the AHS teacher leading the HUNCH program. Cody Farinacci, an Engineer and HUNCH

Project Manager at NASA Glenn Research Center, commended Becker's dedication to his students and the program.

"There are a lot of teachers doing great things, but Luke stands out," Farinacci said. "From the start, he has been committed to supporting his

students and helping other schools. He puts his heart and soul into this work because he knows what his students are capable of achieving.

It's wonderful to see his efforts recognized."





Thursday, March 27, 2025 - Nikki Hallman

US Senator Klobuchar honors Braham High School teacher for winning national award

A few students were able to speak with Klobuchar during the virtual event about projects that they are currently working on. Charlie Roed is a junior at Braham High School and Luke Gould is a senior.

They were asked by a NASA program to create a boot that can be used outside of the spaceship. Their design would be attached to the bottom of the boot and made of a tank track with magnets to stay attached to the ship. They powered it with a small motor on the back.

"The hardest part of this project has been trying to control the magnets, turning them on and off," Gould said.

"So what's the purpose of it? It's on the outside of the ship? What does it do?" Klobuchar asked.

"Basically what it is, where if normally they do a space walk and need to set something on the side, our idea is essentially a boot on the bottom of their feet so they can drive around and stay attached to the ship and have both hands free and stay attached to the ship at all times," Roed said.

After sharing the boot project that they are working on for NASA, Klobuchar wanted to suggest inviting them to meet with the head of NASA.

"We can find a way to bring you to Washington and you could go to NASA; I could arrange it. I know the head of NASA, a guy named Bill Nelson; he is a friend from Florida who is a former senator. We could have you meet with him, and we could also have you meet another senator, Mark Kelly, who is an astronaut — he got elected to the Senate afterwards from Arizona," Klobuchar said. "It would be fun to see, have you share first-hand some of the work that you have done, but I just want to mostly thank you. It's a great project, and to have real-world, or we'll say real-planet, (and) lunar practical uses is what makes it even better."

Luke Becker Minnesota State Teacher of the Year Letter of Support



A prosthetic foot for a US Air Force pilot, microgravity washing machines for NASA, zero gravity intravenous drip for NASA HUNCH and super mileage experimental vehicles: What do these seemingly unrelated items have in common? They are all creations of students of Luke Becker, a protege, collaborator and colleague of Mark Westlake. Luke's problem based, STEM focussed instruction brings learning to life. It is why we proudly recommend him to AFA for Minnesota State Teacher of the Year.

The prosthetic foot Luke and his students built for a US Air Force pilot with physical issues is now used by top paralympic skiers. That experience brought him to the attention of NASA, which sought his proposals for other hardware projects via it's HUNCH program. Luke sought and was awarded a Lemelson-MIT InvenTeam grant in the amount of \$10,000 to have his students create a microgravity washing machine for NASA, to come up with an effective way to wash clothes on long-term space missions in an environment where air and water don't mix and soap can't be used.

I visited Luke's classroom, workshop and lab at Armstrong High School in Plymouth, MN - a suburb of Minneapolis. I watched him lead his classes throughout most of a school day. His tech - engineering classes are more like college seminars. His students choose a problem to work on for the semester. Each has his/her own work station with CAD software. Luke provides advice and guidance, rather than teaching authoritatively from front of room. Luke says, "We don't build widgets here. If it doesn't have a purpose, we don't do it."

Luke wants to create solutions for actual problems and give students a purpose for what they are designing, building or inventing. Becker teaches his students to see the possibilities, to set big goals. He provides opportunities — through hands-on, project-based learning — for students to reach levels of potential they never thought possible. With that objective, Becker has created a program that encourages them to explore and compete.

Luke is a whirlwind of constant action. He is a financial rainmaker to fund lab equipment and travel. Every six weeks he travels with his students to NASA in Houston to interact with HUNCH, its scientists and engineers. They all travel together for competitions around the globe. In international technology competitions, Becker's students have beaten teams from Cal Poly, Texas A&M and Louisiana Tech. His students see their classroom experience as a gateway to careers in technology fields.

Erick Norby, principal of Armstrong High School, stopped in during my visit to Luke's lab. Norby stressed how Armstrong's finances are strained. But he said Luke had his administration's full support. They want Luke to keep doing what he is doing. The school knows they have something special in Luke Becker. It will find a way to fund his program and its needs. With Luke's Mark Westlake connection, intellectual ideas, curiosity and electricity flow. And funding will continue to be available to enable Luke's extraordinary program to continue and flourish to benefit students at Armstrong High School .

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Lawrence Sagstetter, Minnesota State President of AFA