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THE BEST OF

OSHKOSH



**Family Safari**

The Svenningsens and their award-winning helicopter

**Success Stories**

SportAir Workshops help build builders

**High-Flying High School**

Meet the students and staff of the West Michigan Aviation Academy



Taking a moment to look back

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**ON THE COVER:** With no AirVenture in 2020, we dug back into our archives to look at some of our favorite memories from years gone by. Photo collection from EAA archives

**ON THIS PAGE:** Gene and Cheryl Littlefield — he in the cockpit and she on the wing — roar over the convention grounds in their Stearman during EAA Oshkosh 1993. Photo by Jim Koepnick



For more on many of the topics in this issue, visit [www.EAA.org/sportaviation](http://www.EAA.org/sportaviation).  
To view and submit aviation events, visit [www.EAA.org/calendar](http://www.EAA.org/calendar).





# A BRIGHT FUTURE FOR AVIATION

HOW ONE HIGH SCHOOL IS KEEPING  
THE SPIRIT OF AVIATION ALIVE



STORY BY CHRISTINA BASKEN  
PHOTOGRAPHY BY JIM BUSH

**IF THERE IS ONE THING THAT EAA IS** passionate about, it's getting youth involved with aviation. We love hearing milestone stories. Whether it's a first flight or passing a checkride, it always makes us smile. But there's one story in particular that really gets me excited about the future of aviation and The Spirit of Aviation.



# A

high school located on the grounds of the Gerald R. Ford International Airport in Grand Rapids, Michigan, was created with the sole purpose of fostering interest in aviation by providing youths with the opportunity to learn and full access to the resources they need to reach their aviation goals.

West Michigan Aviation Academy is a tuition-free public charter high school that was created in the fall of 2010 and founded by Dick DeVos. WMAA started small with 80 freshmen learning in a 25,000-square-foot school. Today, the school has more than 600 students operating out of a 42,500-square-foot building.

The school offers students typical core classes such as English, mathematics, and science. However, because it is an aviation-themed school, the curriculum is designed for students who have a passion for aviation, engineering, science, and technology.

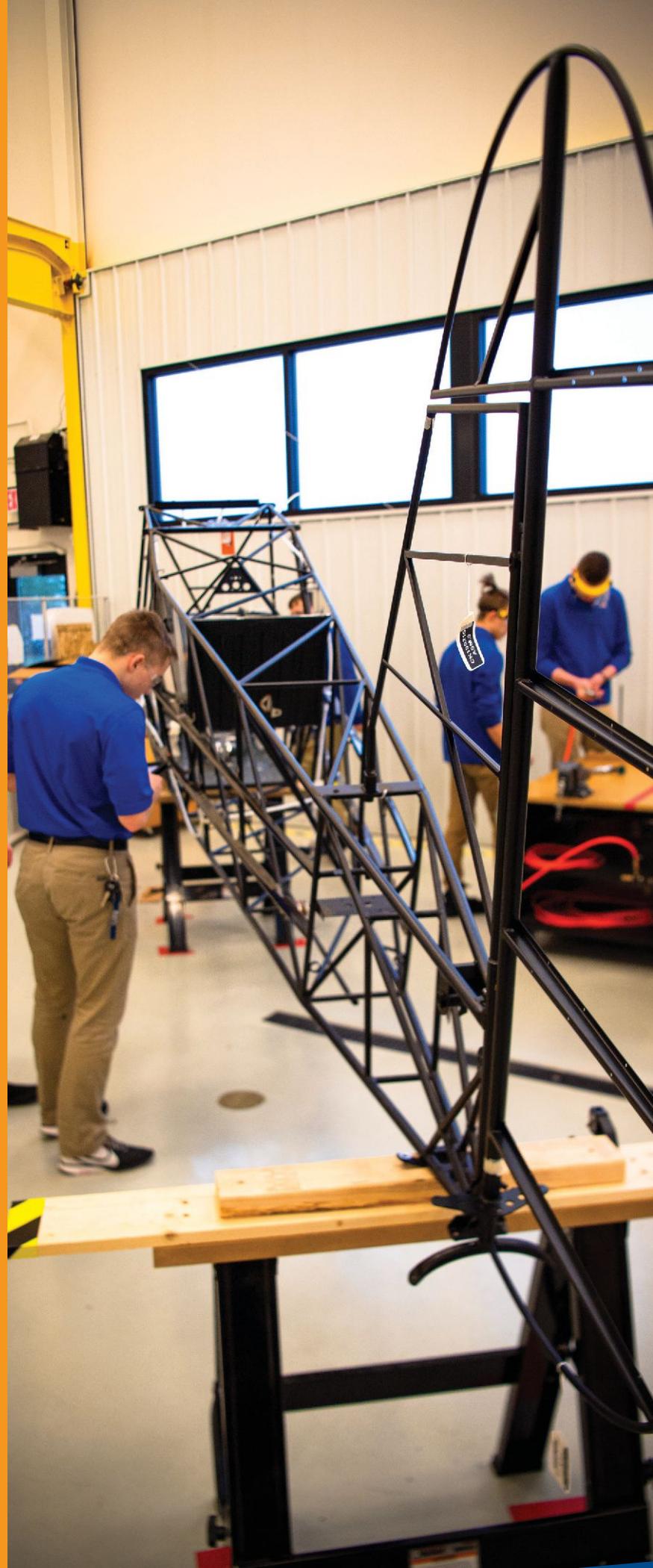
This high school is unlike anything I've ever seen. Students have access to RC model building courses, weather and climate courses, aerospace design and simulation, aviation maintenance, private pilot ground and flight school, and, my personal favorite, a shop class where students get hands-on experience in building a CubCrafters Carbon Cub EX-2.

This school is an aviation dreamland.

At the end of the day, however, the school felt just like any other as I watched the WMAA cheer team gather for practice in the common area.

One thing I couldn't help but notice was a familiar-looking airplane hanging above the students in the common area: a Corben Junior Ace Model E. The airplane was donated to WMAA by the Seno family. Built by Louis C. Seno Sr. and Louis C. Seno Jr., this Junior Ace flew the entire perimeter of the continental United States in 1976, a distance of 11,600 miles in 39 days.

In 2014, the donation of the Junior Ace came with a generous check for \$150,000 to support WMAA graduates planning to attend Embry-Riddle Aeronautical University. Louis Jr., Embry-Riddle's former vice president for corporate relations and government affairs, has had a long-standing relationship with EAA. Louis currently serves on EAA's board of directors. Before he joined the board, the Seno Corben Junior Ace was a staple during the last years of the EAA conventions in Rockford, Illinois, and for many years to come in Oshkosh.





**Top:** WMAA Dean of Aviation George Pavey.

**Middle:** A Corben Junior Ace Model E, donated to WMAA by the Seno family, hangs from the trusses in the common area.

**Bottom:** WMAA Aviation Instructor Brian Jansen.

**Left:** WMAA students work on building a Carbon Cub EX-2 under the supervision of Brian Jansen.

#### SUCCESS OF WMAA

**Part of the reason** this high school is so successful is the passion shared by the instructors and administrators with the students.

“The staff and instructors at the school have been probably the best teachers I’ve ever had in my entire life, through any of my school career,” said JD Buckley, a junior at WMAA. “They help you all the time. They’re always there for you. They want to help you as much as possible so they put as much time into making sure that your school experience is the best it can be. That really helps and makes it an incredible experience overall, whether it be academically and just the experience socially.”

WMAA Dean of Aviation George Pavey said students are able to walk through the front doors without knowing anything about aviation and leave as a pilot through one of WMAA’s capstone courses — a private pilot flight school course where students are able to earn their private certificate by flying during school hours and earning high school credit.

“What we’re finding over the years is that this is opening their eyes to the breadth of the possibilities within the aviation industry,” George said. “... Through that, we like to think that we don’t just talk about aviation, we don’t have it in our curriculum, but we actually do aviation. So, by the time they leave here, they’ve been immersed not only in kind of the academic side of it but the actual doing side of it, so that when they leave here, they’re poised to go off and really focus in on things that they’ve figured out that they really love to do.”

Another key program offered at WMAA is the build-a-plane project.

“As an aviation maintenance instructor, my job is to help the students navigate the build process of the EX-2,” WMAA Aviation Instructor Brian Jansen said. “In order to do that, we have to read through the manuals, look at FAA documentation and different things like that, in order to make sure that we’re building the aircraft airworthy and within the engineering intent that [CubCrafters] had in mind.”

Brian said the reason for selecting the Carbon Cub EX-2 as the kit for the class was because it had the most extensive manuals they could find.

“There’s 8,000 parts that go into this, and there’s very little fabrication from a traditional standpoint that the students are exposed to,” Brian said. “This is really important for us because it’s difficult enough to take those 8,000 parts and put them together in the correct order. And removing that fabrication to where they just get an idea of how to install larger components, follow along with the manuals, is a great springboard for students to learn the aviation trade.”

For the build-a-plane project, the class is broken into teams. Each team is responsible for a different part of the build.

“We wanted to get the full picture of what manufacturing is within the industry,” Brian said. “So, we’ve taken our teams and we’ve broken them down into three components. There’s always a quality component, an engineering component, and a build component. Each one of the students is part of a different team.”

There’s a fuselage team and a wing team, Brian said. Within those teams, students have a chance to break down even more of what’s going on in regard to aviation maintenance and manufacturing.

“They have a chance to do it with the engineering aspect, the quality aspect, and then the actual manufacturing of the aircraft, just like any large manufacturing company would do,” Brian said.

**WMAA senior Murphy Killeen**, who was part of the wing building team, said that he would be an entirely different person if it weren’t for WMAA.

“When I came here, I was just a ninth grader who bounced off the walls and acted like the world revolved around him,” Murphy said.

While he said he had a “good heart,” Murphy said he didn’t really apply it in the right places until attending WMAA.

“I was a bit of a trouble-maker,” he said. “Since coming to this school it’s really turned my life around and helped me set on the path of life that I really wanted to go. Through the help of all the teachers, all the administrators, and counselors, it’s really shaped me into a better person, and I don’t really think I’d be in the same place I am if it weren’t for their help.”

Brian said if students never touch an airplane after they leave school, he would be okay with that because the skills they learn from aviation are transferable to any other field.



WMAA offers students several different aviation courses to choose from. Here, students are working with a supervisor to build and test fly RC model airplanes.

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– Murphy Killeen

“The level of detail and commitment that it takes to build an airplane is directly transferable in any other discipline that they choose,” Brian said. “They have to look at those complicated processes that they’re working on and figure out, okay, how am I going to take something that I don’t know how to do and work through that to get an actual product at the end. So, it’s really prepping them for college-level because they’re not always going to have a professor there for them.”

Brian said there are currently 20 seniors and 20 juniors working on the build-a-plane project. The students started the project at the beginning of the school year, in August 2019, and will finish in May 2021.

WMAA senior Taylor Hall said, so far, they’ve installed all of the ribs and put in drag wires and anti-drag wires.

“Right now, we are squaring our wings and trying to get all our compression tubes to be perfectly squared,” Taylor said. “... We’ve put in a lot of work to get to where we are, it’s been a strenuous process.”

WMAA senior Gavin Helder said he has learned a lot through the build-a-plane project, including how to use blind rivets and drill into hard surfaces.

“Working here on this plane has allowed me to discover my passion and really help me ignite it,” he said. “And it allowed me to decide that I want to be an AMT [aviation maintenance technician]. Working together with people on this project has allowed me to grow a form of community and to gain friendships I really didn’t think I’d get.”

Another exciting capstone course offered at WMAA is the RC building course, which I actually had the pleasure of sitting in on. It took a lot of convincing me that this was an actual high school course and not just a bunch of friends getting together in an after-school extracurricular having fun. In all seriousness, though, this course seemed like an awesome way for young students to learn how an airplane operates on a smaller scale.

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WEST MICHIGAN AVIATION ACADEMY



During part of the class, the students walked their RC builds to the gym to put their design to the test. There were a lot of successful trial runs – and some not-so-successful ones. Again, I thought this was a perfect way of demonstrating what works and doesn't work without the risk of crashing a real-life airplane and facing potentially fatal injuries.

WMAA sophomore Sophie Witters said she knew she wanted to do something within the aviation field before high school, and WMAA helped her to discover her passion for aerospace engineering.

"Everything about this school is perfect for what I want to do when I grow up," she said, noting that they build every part of the airplane during the RC building course, including cutting the wood pieces, building the fuselage, building the wings, and covering the airplane.

George said WMAA started with an RC airplane club and added it to the curriculum to align with the direction the aviation industry was heading in.

"That club then became a remote-control airplane class for sophomores," George said. "Which then, as the market has kind of changed with unmanned aerial systems, we've introduced an introduction to unmanned aerial systems. Now, we're going to also offer a ground school for students for the unmanned aerial system FAA test."

**Above:** Three WMAA students are hard at work practicing their skills on a cutaway jet engine.

George said anyone can come and attend WMAA, although space is limited.

"They just put their name into our application process and then the state draws from a lottery," George said. "We've been very fortunate over the past several years that we have become so popular that we have a rather large waiting list."

At the end of the open enrollment period, all applications are counted. If there are fewer applications than openings, all applications are accepted. Otherwise, if there are more applications than openings, a random selection lottery will take place to determine who will be accepted and who will be placed on a waiting list.

When students first join the school as freshmen, they are required to take a semester of introduction to aviation and a semester of introduction to aviation history and literature. As sophomores, students are able to take 10-week electives in several different aviation courses ranging from aviation preflight planning, aviation weather, introduction to aviation physiology, introduction to aviation maintenance, introduction to air traffic control, or introduction to aviation military flight science.

“As juniors and seniors, they can either learn to become a pilot, they can learn to build airplanes, or they can work on unmanned aerial systems,” George said. “To do that, we have a lot of tools at our hands. So, we do flight simulation with a Redbird flight sim and desktop simulation with [Redbird Jays]. We also have strong partnerships with several of our community partners [like] Civil Air Patrol. We also partner with our folks down at Kalamazoo in the Kalamazoo Air Zoo, and our kids go down and work on the restoration project with a World War II airplane.”

Arguably, one of the most exciting parts of being a student at WMAA is the head start these young adults are getting on anything they want to do within the aviation industry.

“A lot of times when kids think about aviation, they’re thinking pilot, maybe air traffic control or maintenance, but they really have no idea of all the different aspects within the industry that they can participate in until they come here,” George said. “... We have students that are just thriving out in the industry.”

A previous student is a first officer at Republic Airlines, another is a corporate pilot, and several are in military flight training, George said.

“They’re just finding that this industry is starving for young talent,” he said. “And by having an opportunity such as this in high school, to really dip your toe in the water and figure out what you might be interested in and then kind of move in that direction in high school, we feel it’s just such a leg up for our students.”

JD said he is excited about the steps his school is taking to work with local colleges.

“One of the biggest things this school does for you when trying to apply to a college, especially Western [Michigan University], is it gives you connections that you don’t necessarily get at other schools,” he said. “Western is actually working with us this year to get closer and see how we can build a relationship to better streamline students into their college. So, helping me and anyone else that would like to go there is a huge factor that they’re working on this year.”

Like all other high schools, WMAA offers athletic teams for students to join, such as baseball and volleyball, and other clubs like cheer and robotics. Sophie said one thing that really excites her is the Lady Aviators Club.

As the name implies, the club is just for ladies and strives to inspire interest in the aviation field. The club, which meets once a month, includes activities, events, and speakers, Sophie said.

“We have ladies that are pilots, ladies that have built planes, any part of the field in aviation that you can think of, we have women come in,” she said. “It means the world to me. I’m just glad I have this opportunity. I don’t know of any other high schools that are like this.”

JD’s advice for other youth interested in a career in aviation is to talk to as many people as you can within the industry.

“I think that aviation is a career that is boundless, really,” JD said. “It kind of goes on forever. There are more opportunities than you could possibly imagine. So, if you’re ever considering it, I would definitely jump into it. Talk to as many people as you can. Really get to know the field, because I learned something new every day, and you really can’t know everything about it. ... You’ll be really surprised at what you find, and you will definitely want to do more.”

Brian said he loves having the opportunity to share his passion for aviation every day with his students.

“As soon as you get a student involved in aviation, it’s a hook,” Brian said, “I think there’s a lot of us that have walked away from aviation and haven’t lasted very long before we’re back into it because the level of precision and detail that’s associated with aviation is such an amazing industry to be a part of that students just fall in love with it.” *EAA*

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