

The Flypaper

Promoting Sport Aviation in Central Illinois for More Than 60 Years



February Chapter Gathering

The February Chapter 129 gathering started with a sampling of members' great chili recipes and side dishes. Awards were presented to recognize members for their efforts in 2022 that helped make our chapter function and grow. Thanks to all!

Our program featured Bill Thacker presenting

"Introduction to covering - Part 1"

- Intro to the Stewart System Process
- PA 12 elevator cover

There are several covering "processes" to choose from. Stits, SuperFlite, Airtech and Stewart system just to name a few. All are approved through their own specific Supplemental Type Certificate (STC). After an aircraft is completed an IA will complete a form 337 referencing the STC and return the plane to service. It is really the dealer's choice when deciding which system to use as the process is nearly identical across the board. The fabric used by nearly every system is exactly the same dacron material called Ceconite. The difference between systems is either the adhesive, paint or both. In any case to be in compliance with the STC that is chosen one must follow it throughout the entire process.

~See Covering Page 3



You Have Information March!

March Membership Gathering

Corned beef and cabbage will be on the menu for March!



Thursday, March 16 at 6:00 PM

Our speaker will be Brian Lloyd who followed Amelia Earhart's around the world solo flight in a single-engine plane. Brian will attend virtually.

Solo Around The World In A Mooney



Bring a dish to share!

- 6:00 - 6:30 Meal and Discussion
- 6:30 - 6:45 Cleanup
- 6:45 - Visitor intros, chapter milestones, discussion
- 7:00 - 8:00 Speaker

Chapter 129 VMC Club - March 18

Chapter 129 will host its second monthly VMC Club meeting March 18 at 9:30 a.m. in our chapter hangar following our pancake breakfast.

Real world scenarios will be presented and discussed to determine the best solution from the conditions presented.

Non-instrument rated pilots who want to improve their proficiency have an excellent resource through EAA's Visual Meteorological Conditions (VMC) Clubs. The purpose of EAA VMC Clubs is to build proficiency when flying under visual flight rule conditions.

EAA VMC Clubs are extensions to local EAA chapters and offer monthly meetings in which pilots can network and share knowledge and experience. The meetings use real-world scenarios to engage members, and allow a free exchange of information that improves awareness and skills. The intent is to create a community of pilots willing to share information, provide recognition, foster communications, promote safety, and build proficiency. Through the EAA VMC club programs, visual flight rule pilots have improved their proficiency, and they love it.



- **March 18 - 0930**
- Complimentary 6 month EAA memberships available
- Qualifies for FAA WINGS credit!
- Come early for breakfast



The February VMC Club meeting attracted a good crowd who engaged in a great discussion over the snowy scenario presented.

"What would you do?"

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BLOOMINGTON-NORMAL, ILLINOIS



~Covering from Page 1

In general these are the steps of recovering an airplane:

1. Remove the old covering, clean, inspect and epoxy paint the skeleton.
2. Attach the fabric to the airframe
3. Shrink the fabric with heat
4. Apply coatings to seal and protect the fabric from UV rays
5. Paint it to make it look pretty.

For our Aircraft Covering Part 1 presentation we took a PA12 elevator through step 3...kinda. More on that later. I have had great success with the Stewart System and have resigned to use it exclusively going forward. Stewart is a waterborne system that is for the most part completely non-toxic. The glues have a pleasant smell that does not require elaborate ventilation in the workshop. Being a waterborne paint process does come with its challenges but the folks at Stewart are very good at answering the phone and providing technical advice.

To expedite the process I had already accomplished step 1, uncovered, inspected and epoxied the frame.

- ◆ We "pre-glued" the edges of the frame with a small amount of glue.
- ◆ Trimmed the fabric to fit over the hinge points
- ◆ After positioning the fabric we used a low heat setting on the iron to clamp the fabric into place
- ◆ Then we fully glued the fabric to the frame and trimmed any excess.
- ◆ With still a lower heat setting preshrunk the fabric to remove any wrinkles.
- ◆ Clamped and glued and trimmed the other side.
- ◆ Then shrunk the fabric using a progressively higher heat setting to get the desired and final tautness.

Next steps: Complete the attachment process by rib stitching. Apply fabric and 2" wide tape of the same dacron material over the stitches and around the perimeter and then begin the painting process to protect and make it pretty! To cover an aircraft is really a very simple thing to do. Like most projects, break it down into small manageable parts and have at it. Don't be afraid. **Just do it!**



Cross Country Cubbin'

I remember looking at cracked fairings and wingtips on a 1971 Cessna 172 and wondering why they didn't use a more resilient material in the manufacturing process. Bill Thacker's answer for me was simple, and one that most of us should know pretty well: in those days, they just didn't plan on these airplanes lasting this long. It was almost like an automobile; life-limited and bound for obsolescence. The new truth is that most general aviation airplanes, whether manufactured or homebuilt, have or likely will outlive the people who built them. Like children, we send them forth into the world destined for long lives of adventure. N96EX, a CarbonCub EX built in 2018 by Michael Rice of Mayhill, NM, is such a child with its whole life ahead of it. Sadly, Mr. Rice passed away last year at the age of 79. So much of his energy poured out into building this airplane and, after only four years, he has sent it out into the world to write its own story. Michael's estate named the EAA to foster his airplane to its next home, and it is planned to be auctioned at the annual Gathering of Eagles during AirVenture 2023. Michael's online obituary even asked that charitable donations be made to the EAA Aviation Foundation.

When EAA was informed of the donation, they sought a pilot from the organization to retrieve the airplane from Alamogordo, NM (ALM) and bring it to Oshkosh. A volunteer with EAA Air Tours, Bill

Thacker put his name in the hat and was subsequently asked to bring the airplane more than 1,000 NM northeast to its temporary home. Bill has flown across this country in small airplanes hundreds of times. While it always is a joy for him, he never



misses an opportunity to share it with someone else. In this case, it was his son-in-law. So, Bill and I met at Chicago O'Hare on February 19th and made our way to New Mexico. We spent the evening at the home of our good friend, Mark Dankel, who had been a crucial part in Bill's Super Cub restoration and who had known Michael Rice from his local EAA community. Mark brought us to ALM on Monday morning where we got our first look at the airplane.

N96EX is a CubCrafters CC-1865 CarbonCub EX with a 180HP Titan engine and is covered using Oratex. It was built with a particular focus on technology. Its equipment includes a Garmin G3X Touch, a GFC-500 Autopilot, and dual electronic ignition. It also includes a Pitot-Static system with integrated angle-of-attack sensing and warning capability. When sitting in the seat, it feels like any Cub. This seems to change when you open the throttle, however. Bill and I waved goodbye to our friends as we taxied out for takeoff.

Bill took the front seat for the first leg and elected for a lap in the pattern before pressing on to our first stop. The first challenge was stating the callsign on the radio. Try saying *November niner six echo*

x-ray one time fast, let alone five! I would equate a full-power takeoff in this airplane, even with two not-light pilots and full tanks, to a max-thrust takeoff in the Boeing 757 I fly at work. It almost seems to be, in a word, unnecessary. With almost double the horsepower I am used to having in a Cub, there is no shortage of power with this engine. It makes for a great back-country bird or density altitude performer. We flew straight north to start. The only significant terrain on the route was the Sierra Blanca range. Alamogordo-White Sands is situated on a dry lake between the Sierra Blancas to the Organs to the southwest, and the San Andres range to the northwest. Additionally, most of the area is encompassed by the White Sands Missile Range restricted area.

~see *Cubbin' Page 5*



Cross Country Cubbin' (cont)

~from Cubbin' Page 4

We flew north until we got to Carizozo, NM where we could safely pass the mountains. It was about this time that we realized the heater didn't work. Fortunately, it was not terribly cold. Not yet anyway.

Our first day's flying was a bit of a race against nature. Our major contender was exceptionally high surface winds nearing 40 knots which might prevent easy landing until we got north of Amarillo, TX. In fact, surface winds at our departure point exceeded 50 knots the very next day. Runways along the route were at least pointed into the wind (and an off-airport landing in the plains is always into the wind), so we felt safe going. Even with a powerful motor, a Cub is still a Cub. 90 knots true is not the best tool to go far in a fast way, but we were blessed with the rare and elusive tailwind which gave us an average 30 knot push. With around 6 hours of fuel endurance, we had plenty of range to get past the windy plains of northwest Texas into the calm of Oklahoma. Along the way was some beautiful southwestern scenery. I spotted a gang of elk racing through the plains southwest of Amarillo. I wished we were able to fly this trip low and slow to get a better view of the countryside, but the tailwind was hard to deny if we wanted to make good progress before sunset. There were also some massive dust storms in the distance which appeared to reach a couple thousand feet above the surface.

None were too close to our route, thankfully. Our first leg took us to Alva, Oklahoma (AVK) in a backside-numbing 4 hours and 40 minutes. Neither of us had spent



transcontinental route somewhat familiar to us. CAM 34 was the same line on which Transcontinental Air Transport (TAT) established its Coast-to-Coast in 48 Hours Air-Rail service in 1929. It was also known as the "Lindbergh Line." Bill and I often get to tell the TAT story at four stops around the US with the Ford Trimotor Tour as we fly in one of the very airplanes that inaugurated that service. These arrows, in conjunction with beacon towers (like the one near Lake Bloomington), were critical for navigation in the early days. There are a few websites which have compiled a list of arrows and beacons still in existence, including their coordinates. I have arranged many of them into a ForeFlight map layer which helps me to spot them. It is an ongoing project of mine to plot them all.

~see Cubbin' Page 9

that much time in an airplane without lavatories in a very long time.

A little while before landing, we dipped down to catch a glimpse of a concrete navigation arrow (AKA: Lindbergh Arrow) just outside Fargo, OK. This arrow was located on the Amarillo-Kansas City segment of Civil Airmail Route #34 which was a



Builder Update - A Visit to Dean's Workshop

On this sunny Saturday afternoon, I ventured up to Eureka to get a look at Dean and Rick Olson's Wag-Aero project, a replica of the time-honored classic, the J-3 Cub. I found Dean in his workshop assembling a workbench full of hand built parts, many fabricated from a number of jigs he had built. Aside from bolts and other fasteners, all parts for this aircraft are hand made from the Wag-Aero drawings. The fuselage hangs from the shop ceiling, high enough to 'not hit my head on it,' complete with the added framing to accept a 125 hp engine if needed in the future. Dean is planning for a 100 hp build. The engine type is to be determined.

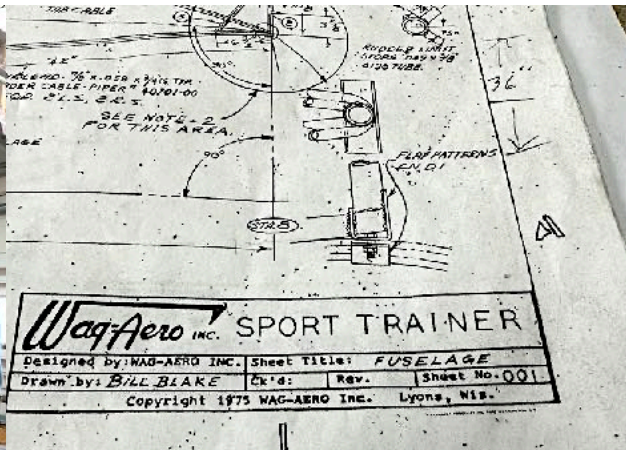
~See Dean Page 5



Some parts require close tolerances for a good fit so they were laser cut at a local shop and welded here.

Other thin-metal parts are cut to print on a router table and bent to shape with a fixture pressed into a rubber foundation with a 20 ton press.

Dean explains the challenges involved with welding the 0.030 wall tubing.



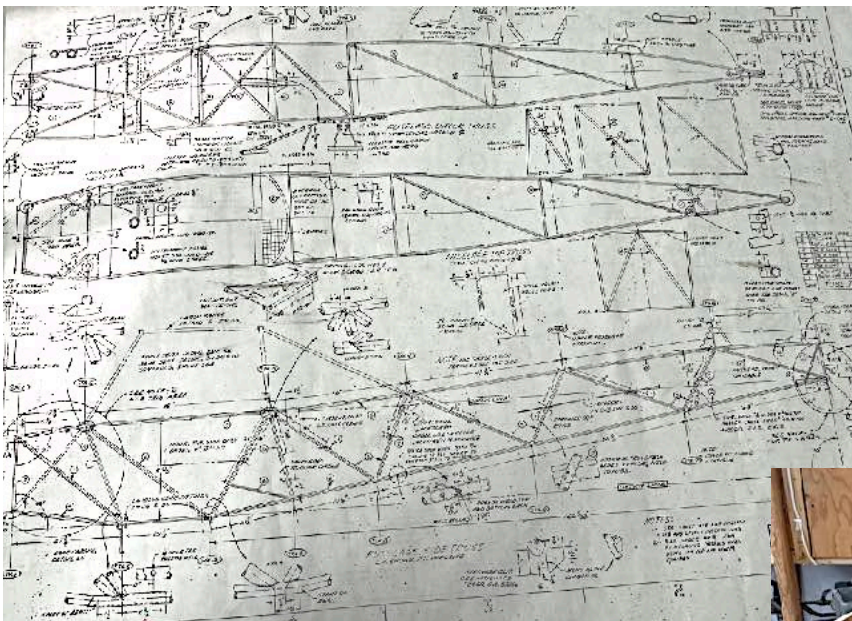
Builder Update - A Visit to Dean's Workshop



The fuselage hangs from the shop ceiling, high enough to 'not hit my head on it,' complete with the added framing to accept a 125 hp engine if needed in the future.



The fuselage frame involves many accurate tubing cuts at various angles and multiple tubes of various sizes intersecting at one point.



Rick has completed the assembly of the winglets and they are ready for the wing assembly. The workbench will be reworked to allow better access to the many wing parts.

~Dean from Page 4

Dean has been here before, having built his Mustang II over a period of 20 years, also from a set of plans. The Olson Cub project started in December and consumes about 40 hours per week of Dean's time. He expects to fly his Cub by Spring 2024.

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Young Eagles 2023



Dustin Davis
Young Eagles Coordinator

The Our first Young Eagle Rally is quickly approaching. Now through July 31, chapters will earn double credits for each youth flown age 8-17. That means we are earning \$10 per youth. What do we do with this money? We pay (approximately \$1000 per person) to send two youths to attend a week-long aviation camp held at Oshkosh each summer. This money or credit as it's referred to is provided by EAA with requirements on how it is to be allocated. One way we can use our credits is to purchase supplies such as tables, caution tape and sick sacks for YE events. Speaking of events, our first YE rally is scheduled for March 18th at

Bloomington. The event is scheduled 11am - 1pm in an attempt to avoid delays from potential fog and low cloud coverage this time of year. At the time of writing this we had 38 youth registered with over two weeks remaining to register more youth, 7 pilots and 7 ground crew. We could definitely use more ground crew. If you are available please complete the survey that was sent in a previous email and will continue to be sent in future emails. Additionally on March 18th, the Bloomington chapter will be hosting a fundraising breakfast in their EAA hangar from 7am-9am. Following breakfast will be the kickoff of their VMC club with monthly meetings on the second Saturday of the month from 9:30am-10:30am. Once that is finished head over to the Young Eagle Rally and volunteer on the ground or in the air. A few reminders:

1. Reserve an aircraft if applicable 2. Update your profile at YEday.org for both ground crew and pilots



3. Check that your youth protection and background check are still current (valid for 3 years; required for pilots and encouraged for ground crew)
4. Current to take passengers
5. Have aircraft passenger liability insurance for the aircraft used (owned, rented, or borrowed) with \$100,000 per seat coverage.

- March 18 - YE Rally Bloomington**
- April 29 - YE Rally Champaign**
- May 20 - YE Rally Bloomington**
- June 17 - YE Rally Champaign**
- July 15 - YE Rally Bloomington**
- August 5 - YE Rally Rantoul**
- August 26 - YE Rally Mattoon**



Cross Country Cubbin' (cont)

~from Cubbin' Page 6

Stopping in Alva turned out to be quite a treat! Not only was the fuel relatively inexpensive, but the FBO was incredible! The entire place was a hall of aviation history. There were many great photos on the walls and cases full of aviation memorabilia. One of the best parts was a by-donation concession counter. It was full of snacks and beverages, and there was even a loaf of bread with lunchmeat in the refrigerator. Bill and I both found a ham & cheese sandwich to hit the spot! Little amenities like that go a long way on a thousand-mile journey. We wish we could have spent a longer time there, but our goal was Kansas City by sundown.

It was my leg to fly. I hit the front seat and also decided for a lap in the pattern before heading onward. Bill had a couple notes for me about how the airplane flies compared to the Cubs with which I am acquainted. The big items were the difference in power and the fact that this one was equipped with toe-brakes as opposed to heel-brakes which are conventional in a taildragger. This makes it evermore crucial to keep your feet low on the pedals. The airplane also has flaps. Most Super Cubs do, and they're very effective. A full-flap approach is a very nose-down affair. Like the full-power takeoff, it almost seems like overkill. That is, until you need it.

The leg to Kansas City was uneventful. I used the time to learn some ins and outs on the G3X. It is

quite an incredible piece of equipment. I have tons of time behind G1000s and

other glass displays, but none with so much functionality wrapped into such a small package. A pilot who takes some time to familiarize with this system has quite a lot of useful tools at their disposal. Just to name a few, I especially liked the VFR chart moving map, a complete set of engine parameters (including



carburetor temp, which I had never seen), and a cool touch-interface. I see a lot of homebuilts with impressive tech in the cockpit. Michael's Carbon Cub is no exception.

Lee's Summit Municipal Airport (LXT) outside Kansas City was our stop for the night. We touched down just after sunset and taxied to the hangar which was generously provided by EAA Chapter 91. EAA is such a prolific organization and it has always been my favorite aspect of the organization that, with close to a thousand chapters, you can always check in at the local embassy and expand your aviation universe a little more. This chapter has their own spacious hangar and a nice-sized clubhouse for chapter events. They also have a Cessna 152 "on a stick" guarding the front door. After tucking away the Cub, we headed to dinner with Bill's longtime friend and fellow United pilot, Dennis. Dennis brought along his daughter Maggie who was sporting a hot-off-the-press Flight Instructor Certificate. Aviation is often a family affair! We can't wait to see where Maggie's career takes her.

Our second day of flying was to Bill's airstrip, Thacker Airport, in Chenoa, IL. The plan was to fly the airplane north to Oshkosh on a later date when the winter weather had subsided. That meant that we only had about three hours of flying time left to complete the journey. Even so, we were airborne before the sun. We still had a small tailwind at around 5,500 feet. That said, it became clear that temperature was an issue. We anticipated the colder climate and elected for double-socks in addition to bundling a little more. That lasted us only a little while. By the halfway point, I had to transfer control to Bill once or twice to work on getting some circulation going in my extremities. That helped me quite a bit, but we were still pretty uncomfortable. I tried descending to 3,500 to find warmer air. We noted two changes: one degree warmer and about twenty knots less on our groundspeed. Our ten knot tailwind shifted to the nose. We went back up.

Despite the cold, flying across the Midwest is still a beautiful experience. Sunrise over the Missouri River cast some very neat shadows on the contoured farms in that area. Linking up with the Illinois river near Peoria, Bill spotted a dense wedge of geese below us and flying southwest along the river. He then spotted another wedge, and then a third and fourth. As I looked ahead, I could see close to ten in total all following in sequence along the river. There were hundreds, maybe even a thousand! We wondered if our fellow aviators were just as cold, but Bill guessed not considering they were probably working a little harder.

~see Cubbin' Page 10



Our planning team is working to address important issues for our chapter in 2023 and have a good list of events to work through and schedule. As I am writing this it is 65 degrees in Bloomington and I feel a sense of urgency to get going with our planned events.

Our first VMC meeting Feb 18 was well attended and members engaged in some good discussions over the aviation scenario presented. Thanks to Bill for making this happen. I'm sure we all learned something from the event. We are on board to do these monthly, offering our flying community a great opportunity to learn through these open discussion events.

We have a busy Young Eagle schedule put together, please

consider helping out with these rallies. See page 8 for opportunities.

We have been working on a formula for bringing an Aviation STEM program to our community. We started in 2019 but Covid put a damper on those plans. We got going again in 2022 with our first High School age group spending a day at the airport with a tour of the tower, OSF, the fire station and a discussion on aerodynamics and aviation careers. This year, Wayne Aldrich took our program to NCWHS to work with Kim Rolling's STEM Trig class. See more on page 11.

Behind the scenes we are reworking our web page for better communication to our members and a better information site for people who want to learn more about how we can support their aviation interests. And our facebook page is getting a review for better visibility and content. All of our NFP and tax

documents are being updated for compliance (not a fun job - thanks Doug for taking on this task)

We just learned that we have been awarded another Ray Aviation Scholarship for 2023. This will be our fourth scholarship to manage and we will be seeking applicants. More to come here.

I am overwhelmed with the efforts of our chapter leaders who are aggressively working to grow our chapter and advance our offering to our flying community, young and old. Fasten your seat belts we have a good year in the works.

~
Charlie



Cross Country Cubbin' (cont)

~from Cubbin' Page 9

We landed at Thacker Airport around 10:00 AM. The winds were howling out of the northwest and my feet were numb. That said, I still managed to push the correct pedals during the landing maneuver. After nearly a thousand miles, only two fuel stops, and 11.5 hours flying time, we shut down outside the hangar and hustled into the warmth to thaw for a few minutes.

I can't remember being colder any time in my flying career. Bill has had plenty of run-ins with numb feet in his fifty years of flying, but that

was the worst one so far for me. And yet, I am smiling as

I write about it. Flying is a lifelong pursuit of adventure. We experience both ends of a broad spectrum, but recounting on those experiences always seems to be overwhelmingly positive, no matter what. I attribute this to one major reason: people. We fly because people have dreamt of it for millennia and have achieved it in great ways for just over a century. The joy and freedom afforded by it is greatest when sharing with others. I remember that summer flight in London, Ohio sitting in a pool of sweat in the left seat of a 152 not because of the exhausting heat, but because that was the flight when my instructor made it click for me on how to set the airplane down without ballooning or floating. I remember a frigid night divert of a two-ship flight into Kenton, Ohio to wait for higher

ceilings because the four of us huddled in one airplane to stay warm, talking and laughing about whatever college guys laugh about. The company of a friend, a family member, a neighbor, or sometimes even a stranger, will always draw the line between utter misery and happy memory. Go fly across the country and take them with you!

Michael Rice built a beautiful flying machine. I am sure he would be thrilled to know that it added one more memorable trip to the logbooks of two pilots from the Midwest. N96EX will soon find its next home. It has a long life ahead bringing joy to many people and unlocking the freedom of flight for decades to come.

~Story by Josh Fisher



Chapter 129 STEM Outreach



Wayne Aldrich EAA Chapter
129 STEM Coordinator



On February 1st and 2nd 2023, I was invited to present our “Introduction to Aviation” program to Kim Rohlwing’s 3rd, 6th and 7th period **STEM Trig classes** at Normal Community West High School. The 3rd hour class combined with the 6th and 7th periods for two classes on both days of about 30 students each.

The first day we discussed a brief history of flight, forces of flight and flight controls. Teaching aides included paper airplanes, models and a hair dryer powered wind tunnel to demonstrate lift, center of gravity and the Bernoulli principle. At the end of the first day, the students were given the following “homework” assignment:

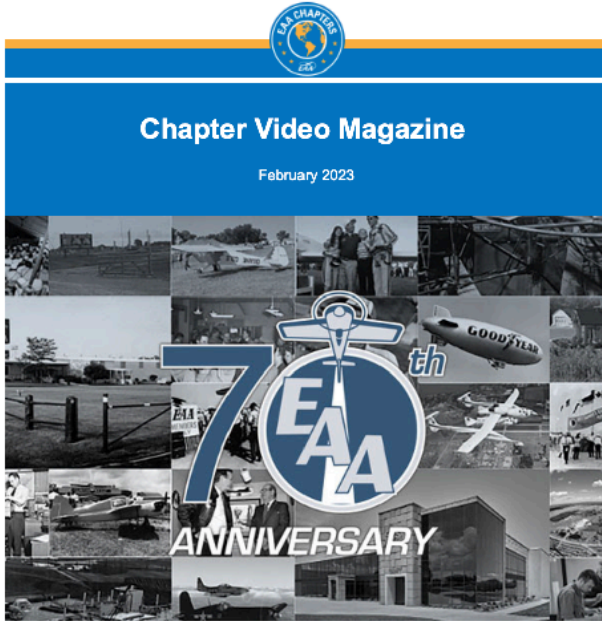
I want to fly from the Bloomington-Normal airport to the Peru, IL airport. From the Sectional Aeronautical Chart, my true course will be 352 degrees. The forecast winds are 20 knots from the west (270 degrees). My true airspeed will be 110 knots. The total distance is 52 nm. What will be my groundspeed and wind correction angle?

The second day began with a review of the homework exercise and the various ways a pilot could determine the answer (including trigonometry). We also talked about the engineering design process, and how “form vs. function” applies to various aircraft designs. The session concluded with a discussion on aviation careers.

Thanks to Mrs. Rohlwing and the STEM Trig students at Normal West for this opportunity. We had a great time and I hope to see many of these students at Young Eagles events and other chapter sponsored activities!



Webinars, Podcasts, Videos!



Find EAA's Chapter Videos at:
<http://eaa.brightcovegallery.com/chapters/detail/videos>

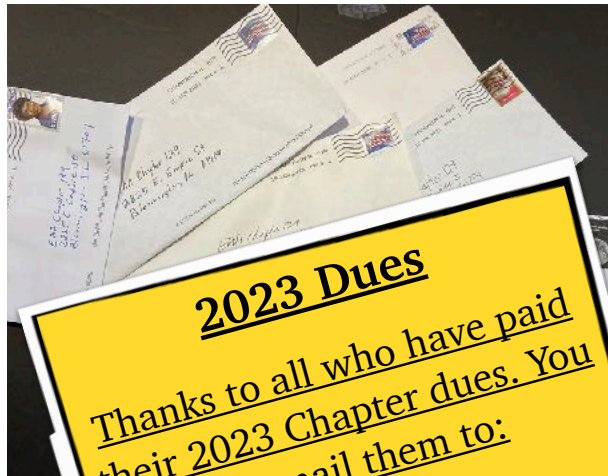


Click here to access EAA Webinars



Be sure to check out the February/March edition of Midwest Flyer Magazine

<https://midwestflyer.us7.list-manage.com/track/click?u=5a323c3fd0b6550d7276e0ac7&id=be3f948d>



2023 Dues

Thanks to all who have paid their 2023 Chapter dues. You can mail them to:

EAA Chapter 129
2825 E Empire St
Bloomington, IL 61704

Wanted

Do you have an aviation story to share? Send your pictures, stories, events, travel adventures, builder updates for our next issue of **The Flypaper**.

Email them to: cmbates50@gmail.com



2023 Calendar of Events

February 16 - Chapter 129 Monthly Gathering

February 18 - Chapter 129 VMC Meeting

March 16 - Chapter 129 Monthly Gathering

March 18 - YE Rally Bloomington

- Chapter 129 VMC Meeting

April 20 - Chapter 129 Monthly Gathering

April 22 - Chapter 129 VMC Meeting

April 29 - YE Rally Champaign

May 18 - Chapter 129 Monthly Gathering

May 20 - YE Rally Bloomington

- Chapter 129 VMC Meeting

June 15- Chapter 129 Monthly Gathering

June 17 - YE Rally Champaign

- Chapter 129 VMC Meeting

July 15 - YE Rally Bloomington

July 20 - Chapter 129 Monthly Gathering

July 24 to July 30 - AirVenture

August 5 - YE Rally Rantoul

August 17 - Chapter 129 Monthly Gathering

August 26 - YE Rally Mattoon

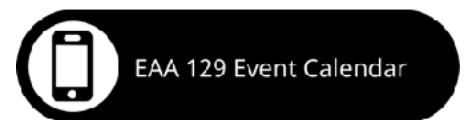
September 21 - Chapter 129 Monthly Gathering

October 19 - Chapter 129 Monthly Gathering

**Every Saturday 7 to 9 AM - Gathering of Eagles at EAA
Chapter 129 hangar F-15**



- **March 18 - 0930**
- Complimentary 6 month EAA memberships available
- Qualifies for FAA WINGS credit!



Join us at the EAA Chapter 129 hangar for our Gathering of Eagles breakfasts **Saturday mornings 7:00 am to 9:00 am** for some great food and some hangar flying at its best.



Chapter 129

Charlie Bates-President, Treas
Jason Jording-VP
Doug Reeves -Secretary
Dustin Davis - YE Coordinator
Wayne Aldrich - STEM Coordinator
George Wilts-Tech. Counselor
Kirk Sampson - Media & Web Editor
Bill Thacker - Advisor