



Build and Fly students pose with their airplanes before allowing them to be flown. L - R: David Mattila, of Otsego, Legion Maxon, of Big Lake, Instructor Tom Rammel, Instructor Henry Williams, Nolan Peterson, of Waverly, and Dalton Rahn, of Maple Plain. Student Gavin Larson, of Howard Lake was not able to attend.

Area youth build and fly RC airplanes

EAA Chapter 878 members share aviation knowledge and construction skills

By Wayne Flury

Five youngsters from the area learned how to build and fly a radio controlled (RC) airplane this summer with guidance from two members of EAA Chapter 878, a local unit of the Experimental Aircraft Association (EAA) of Oshkosh, Wisconsin.

Chapter members Tom Rammel, of Cokato, and Henry Williams, of Buffalo, both experienced RC builders and flyers, used a "Build and Fly" program developed by the national EAA organization. This uses model airplane building and flying to introduce youth to the basics of aircraft construction and fundamentals of flight, and is offered as a companion activity within the EAA Young Eagles program (free airplane flights for youth).

Chapter 878 has a tradition of introducing youth to aviation. In 2023 Rammel and Williams continued that custom with an inaugural Build and Fly event and three potential aviators, using workspace in a hangar owned by the chapter

at the Maple Lake Airport. The program provided the chapter with one RC kit airplane, electronics, accessories, and an RC flight simulator. With support by EAA and discounts by suppliers, the total cost to the chapter was only about 1/3 of normal retail. But, in the end, there was only one airplane!

This summer a second Build and Fly program attracted five 7th, 8th, and 9th grade students. With approval by the national EAA office, Rammel and Williams modified the program slightly by using credits acquired by the chapter (based upon the number of Young Eagles flown in the past year) to reduce the overall cost and substituted a slightly smaller and less expensive RC aircraft. Another chapter member donated some older, but still useable, radio controllers. Thus, all five students were able to build and keep their own airplane and a controller. Rammel and Williams supplied their experience and knowledge about kit assembly and loaned tools from their own workshops.

Build sessions were scheduled in 4-hour blocks, twice a week over seven weeks, with a celebratory "first flight day" planned after the last session.

Rammel noted that this was a very intensive build schedule and time consuming for the students. And as any teacher could confirm, he admitted that it was even more so for himself and Williams as they planned the schedule, set up workspaces, monitored student progress, answered questions, and solved the inevitable problems, while assuring that all students were getting a valuable experience. But Rammel added: "Building and flying RC airplanes is not just about having fun; it's about learning the principles of flight, engineering, and teamwork. Remember, these kids are the future of aviation."

The RC kit selected for the 2024 Build and Fly program is typical of many models available, with lightweight balsa wood used for the parts which are miniature versions of the basic components of an actual aircraft. Though the parts are laser cut into the wood sheets, students had to individually identify, separate, and glue them together. Finally, the aircraft were covered with a brightly colored, heat shrink plastic material known as Monokote. Like many other kits available today, it uses a battery powered electric motor (as compared to the two-stroke engines and special fuel that many of us struggled with in days of long ago) and is ideal for new RC pilots.

By carefully following the aircraft kit drawings and instructions, and with gentle guidance and oversight by Rammel and Williams, each youngster completed their airplane by the end of the planned work sessions and prepared for flight using the chapters' RC aircraft flight simulator.

Flights were planned for August 30 at the Wright Flyers Radio Control Club flying field located adjacent to Monticelli Park in Monticello. Flights were authorized and supported by the RC club. Though that

day featured severe clear blue skies, it also brought enough wind to make flying these very lightweight aircraft problematic for inexperienced pilots. Garth Landefeld, president of the Wright Flyers, and Leo Davids, secretary, stepped in to provide their skills and got the newly built aircraft into the air with each youth builder standing close by. They also provided advice to the kids to use in their future flight activities. A series of videos by Tom Rammel is available at the following website: <https://youtu.be/LB1mdFP5Uxs?feature=shared> and shows some of the construction and flying.

Program participant 13-year-old David Mattila described Build and Fly as: "Challenging, but not that hard once you figure it out." Legion Maxon, also 13, had taken part in the program last year and explained his reason for doing it again: "To learn more about airplanes. I figured that building another RC would be a good start to becoming an airline pilot."

Anyone interested in participating in a potential similar program in 2025 is advised to watch for info on the chapter website, <https://chapters.eaa.org/ea878>, under the Young Eagles link. Note: enrollment is limited.

Since purchasing the Maple Lake hangar in 2021, Chapter 878 has put in a concrete floor, sealed the roof, installed a ceiling and insulation, and has a utility room plus a combined classroom/meeting room/workspace under construction in one corner of the hangar. Fundraising is ongoing for other improvements to make the hangar even more useable for other educational events such as this one, including upgraded electrical, better lighting, a restroom, and heating. The hangar has been designated as the Chapter 878 Aviation Education Center.



Caution: airplanes under construction! Students gained life-long skills as they focus intently upon assembly of model airplane components under the watchful eyes of instructors Tom Rammel (left) and Henry Williams (right). (Submitted photos)