

Historical Review



WEST MICHIGAN AVIATION ACADEMY



MILESTONE EVENTS

- WMAA opened
- Purchased first plane
- Started after-school robotics program
- Introduced aerospace engineering curriculum
- First students

WHAT WE LEARNED

- Essential to add STEM classes
- Need a hands-on aviation approach
- STEM success depends on industry partnerships
- Aviation cannot succeed solely as an extracurricular option

2010-13



MILESTONE EVENTS

- Graduated first class of 75 seniors
- 3 students earned a private pilot license
- Flight training conducted as an extracurricular program
- Tripled the robotics teams—five times more students involved
- Started English Language Learner program

WHAT WE LEARNED

- Robotics and engineering draw students
- Need qualified CTE instructors so students can earn aviation course credits

2013/14



MILESTONE EVENTS

- 9 students earned their private pilot license
- Second expansion (15,000 sq. ft.)
- U of M engineering partnership
- Added Private Pilot Flight School to curriculum
- Ranked #1 “Best Charter High Schools in Michigan”
- Acquired first 3D printer

WHAT WE LEARNED

- Need a second plane
- Need to expand computer science/3D printing

2014/15



MILESTONE EVENTS

- 15 students earned their private pilot license
- Formed partnership with GVSU
- Second plane gifted by Delta
- Robotics program participation quadrupled

WHAT WE LEARNED

- Redbird simulator has a demonstrated impact on student progress
- Industry standards suggest 2 planes support only 14 students (1:7 ratio)

2015/16



MILESTONE EVENTS

- 21 students earned their private pilot license
- Acquired 19 3D printers for engineering and robotics
- Fielded 7 robotics teams with 107 students
- Established job shadow program with GE Aviation

WHAT WE LEARNED

- Ratio of 1 plane per 7 students is realistic per industry standards
- Students would benefit from smaller robotics teams
- Need our own hangar to support expanded flight, operations and maintenance support

2016/17



MILESTONE EVENTS

- 15 students earned their private pilot license
- Our 60th student soloed in summer glider camp
- Board voted to move forward with pre-campaign feasibility study
- 50 students enrolled in first Biomedical Science class
- 90% of graduating class was accepted to higher education
- WMAA ranked 4th of 48 districts in Kent County on the SAT

WHAT WE LEARNED

- We need more space to fill demand for STEAM classes
- Aviation faculty retention is crucial to our success
- WMAA must eventually take over summer solo glider camp to ensure its sustainability

2017/18



MILESTONE EVENTS

- 18 students earned their private pilot license
- Board approved plans to proceed with *Flight Plan* project
- Implemented Curriculum Camp
- 58% of 11th-12th grade students enrolled in and passed advanced coursework
- Formed West Michigan Aviation Academy Foundation

WHAT WE LEARNED

- Scholarships are needed to help students access flight training
- Students have boundless interest in any new STEAM courses

2018/19



MILESTONE EVENTS

- 14 students earned their private pilot license
- WMAA identified as GR Promise Zone school (free Associate’s Degree or job training at GRCC)
- Growth of Career Technical Education (CTE) with Build A Plane class
- Created UAS Ground School
- Pivoted to remote instruction during COVID19

WHAT WE LEARNED

- Our culture of responsibility helped students succeed with online learning
- There is widespread interest in WMAA’s mission, including, but not limited to, aviation supporters
- Robotics Club leadership better suited to industry engineers rather than WMAA staff

2019/20



MILESTONE EVENTS

- Provided in-person and virtual education
- 100th student earned a private pilot license
- Class of 2021 average SAT scores exceeded national average
- Transformed Vex Robotics Club into a Team

WHAT WE LEARNED

- Our cultural expectations and support helped students succeed in a pandemic
- New learning management tools kept students engaged, in and out of the building
- Partnering with the Unmanned Safety Institute allowed us to deliver an industry-level UAS curriculum

2020/21



MILESTONE EVENTS

- Record-setting number of applications
- Opened Flight Training Center
- Alumni flying program begins
- Instituted donor-funded flight scholarships
- Dedicated Veterans Wall of Honor
- Hosted first Senior Engineering Showcase
- 5 VEX teams qualified for the World tournament

WHAT WE LEARNED

- Adding time for individual support (LIFT) improved academic success
- Students provide valuable leadership through tours and shadows

2021/22