



Aspen AERO AV8R Program at a Glance

The purpose of the Aspen AERO (Aeronautics, Engineering, Research and Opportunities) AV8R program is to share with K-12 students of Aspen, our valley, and beyond, an exciting way to apply Math and Science using Aviation and Aerospace as a conduit for learning. It is a program of inclusion with enough facets to appeal to many student interests regardless of their experience, gender, or socio-economic status. This unique program is described in the Four Phases outlined below:

PHASE I: Academic Integration

- Administration Buy-In and Support
- Teacher Buy-In and Support
- Teacher Aeronautical Training Opportunities through our Aeronautics Director
- Extra-Curricular, Co-Curricular, and Curricular Classes in Aeronautics
- Grade-Level Appropriate Classroom Aeronautical Math and Science Presentations by our Aeronautics Director
- Team-Teaching between Staff and our Aeronautics Director
- We employ a “Think; Build; Do” philosophy
- Hands-on, Project-based, Student-centered Learning
- Constantly searching for Educational Aeronautical activities to introduce to Teachers to then deliver to students
- Beginning our first Aspen AERO AV8R Summer Camps

PHASE II: Acquisition and Introduction the Redbird FMX Full-Motion Flight Simulator

- Raising the funds necessary to acquire this multi-purpose machine and the ancillary technology including a training component for our Aeronautics Director in the use of this device
- Developing the Educational Aeronautical curriculum, using this machine, to deliver an experiential, real-world application to classroom lessons in algebra, geometry, trigonometry, geography, earth science, physics, technology, health, physical education, literature, history, communications, and decision making
- Implementation of these lessons in time for our first Private Pilot Ground School and our first Aspen AERO AV8R Summer Camps
- Making this simulator and its 3-aircraft variants available to our Local Pilot Community and thoroughly screened/trained instructors for program contribution-based flight training
- Will allow a reduction in actual flight hours for students in our upcoming Aspen AERO AV8R Flight Academy thereby reducing the cost and our carbon footprint

PHASE III: Vocational Integration

- Offering integrated aeronautical vocational programming designed to give our students a “taste” of careers in commercial aviation, aeronautical engineering, electrical engineering, mechanical engineering, civil engineering, flight test engineering, air traffic control, airport management, airport operations, aviation mechanics, aircraft design, avionics technicians, systems analysis, aviation sales and marketing, to name a few
- Raising the funds necessary to establish our Aspen *AERO* AV8R Flight Academy with our own Diamond DA40 certified training aircraft allowing our students the opportunity to earn their Private Pilot Certificates, Instrument Ratings, and Commercial Certificates
- Raising the funds necessary to establish our Aspen *AERO* AV8R “Just Build It” program allowing high school students at Aspen, and in our valley, the opportunity to build a real amateur-built airplane which will then be sold with the proceeds going back into our next “Just Build It” airplane project. Students involved in this facet of the program will gain experience in aircraft construction, aeronautical engineering, aircraft maintenance, flight testing data analysis, aircraft design and fabrication, to name a few
- Working with state and federal agencies, as well as corporate sponsors, to help us with some of the infrastructure of this program
- Younger students will be prepared for these high school opportunities in part by participating in a radio controlled aircraft project in the Middle School which is supported by an aircraft modeling project in the Elementary School in addition to the robotics experience they already receive
- These vocational offerings will be incorporated into the curriculum of the school allowing for student scheduling as well as elective credit for their efforts
- We will seek out internship opportunities for students with local and state-wide aviation and aerospace related companies
- We will explore opportunities for students to participate in state and national aviation/aerospace science competitions

PHASE IV: Development and Implementation of the Aspen *AERO* AV8R Network

- We will create a network of like-minded school districts in our state and beyond allowing us to share experiences and ideas to improve the delivery and outcomes of this program for students everywhere
- There are three different proprietary programming ideas currently in development at the Aspen School District through our *AERO* AV8R program
- We are currently exploring the technological infrastructure necessary to support this effort
- The S.T.E.*A*.M. (Science, Technology, Engineering, *A*rt and Mathematics) Room, generously allocated recently by the Aspen School District and currently under construction, will house our Simulator and be equipped with multi-media presentation technology including video streaming and live broadcast capability allowing us to share our projects, programming and experiences with other participating institutions throughout the country
- Teacher-developed projects can be recorded, catalogued, and shared with other districts
- Where appropriate, we can invite neighboring schools in the valley to participate in joint-projects associated with our program

WHERE THINGS STAND:

- PHASE I is in full implementation mode
- Classroom aeronautic modules are being delivered daily
- Our first Private Pilot Ground School, including 11 students and 13 teachers, is underway
- We begin our first Elementary Early Release Day AERO AV8R program Feb. 27, 2013
- Plans are being made for our first two high school intra-curricular aviation classes beginning in the Fall of 2013
- Aeronautical Project materials are arriving daily
- Our PHASE II Funding Drive is almost complete and our Simulator has been ordered and scheduled to arrive on our campus by mid-March
- Our S.T.E.A.M. Room is being constructed while we are in the process of securing the funding for the presentation technology and streaming capabilities
- Plans are being made for our first Aspen AERO AV8R Summer Camps with summer
- Work has begun on the Vocational Elements in Phase III including a scheduled fact-finding mission for our first “Just Build It” project, identifying interested students to participate in the various vocational facets, implementation of the supportive aircraft building projects at the Elementary and Middle Schools, to name a few activities
- As we roll-out these phases, we are mindful of their impact on PHASE IV and how we can capture these experiences for future sharing. We are developing a project template that will include the project idea, grade level, intent, Common Core tie-in, and outcomes that can be applied to all lessons thereby streamlining the process and allow for proper cataloging
- We have already fielded inquiries from several school districts around our state and beyond that are interested in a sharing arrangement of our program
- We are also in the initial planning stages of an amazing event coming to Aspen this June. **STAY TUNED FOR THIS!**

