

Org-Type	Government-based		
Lead	NASA Ames Research Center	PoC	Christina O'Guinn
PoC-Phone	650-604-2891	PoC-Email	christina.m.oguinn@nasa.gov
Address			
URL			
Service-Region	Nationwide		
Type	Student Program		
Subjects	Physics Space Engineering Other		
Level	Elementary School (K-5th grade) Middle School (5-8th grade)		
Other-Objectives	Aeronautics (forces of flight, experimentation and investigation and engineering design, science and engineering careers)		
Served-per-Year	Demographics		
Content	<p>NASA Ames Research Center is partnering with Hiller Aviation Museum to develop two aeronautics field trip programs that will be tested and implemented at Hiller Aviation Museum and, once proven, will be freely disseminated to aviation museums and science centers nation-wide. The 'Skyways' aviation math field trip project, currently being piloted at Hiller with San Francisco Bay Area schools, uses a version of NASA's Smart Skies software complemented by a museum tour and a flight planning challenge developed by Hiller. During the Smart Skies portion of the field trip, students are challenged to manage aircraft approaching a major airport. Using math concepts, students adjust aircraft trajectories and speeds to safely and efficiently route aircraft to their destination. Smart Skies has been tested with thousands of students across the country and is a part of an educational outreach effort between NASA and the Federal Aviation Administration. The 'Four to Soar' field trip project engages students in hands-on inquiry museum activities and pre/post engineering design challenge classroom activities. At the museum, students will experiment with aeronautical forces, learning first-hand how the design of a propeller, the angle of a wing and the location of the landing gear affect thrust, lift and drag respectively. In the classroom, students will apply these principles to design propellers, airplane wings and tails to meet certain engineering criteria.</p>		
Outcomes	<p>This program is designed to meet NASA's Informal Education Outcome 3.1: Provide informal education support resources that use NASA, themes and content to 1) enhance participant skills and proficiency in STEM disciplines. 2) inform participants about STEM career opportunities 3) communicate information about NASA's mission activities.</p>		
Started		Funded-Through	
Length	Ongoing	Cost	
Primary-Funding	Government	Primary-\$	
Materials			
Other-Funding	<p>This is a non-reimbursable SpaceAct agreement between NASA Ames and Hiller Aviation Museum. A small amount of NASA resources is provided in-kind for NASA personnel time to modify, test and disseminate existing NASA aero educational resources for the museum environment. Hiller Aviation Museum raises it's own funding from corporate sponsors or foundations to cover it's costs of the partnership.</p>		
How-Assessed			
Best-Practice-Why	<p>This program is still in development, so it's still too early to say. However, the program is based on research-based instructional methods in STEM education, includes a strong evaluation component and strategically targets the overlap of formal and informal audiences (school field trips) where a greater impact is more likely than in only one setting.</p>		
Promising-Practice	<p>Yes. This program demonstrates a promising partnership model: matching NASA content, facilities and people with educational non-profits who have established audiences (for testing feasibility and for dissemination) and with corporate sponsors who provide funding. NASA also serves as a nation-wide dissemination mechanism so that what might otherwise serve as only a local program can be used widely by aviation museums and science centers across the country. This can be especially beneficial to smaller museums who lack the resources to develop programs in-house.</p>		
Sponsor		Sponsor-Org	
Sponsor-Phone		Sponsor-Email	
Other-Orgs	<p>Hiller Aviation Museum, Program_Government-Agencies: Federal Aviation Administration, National Air and Space Museum: Steven F. Udvar-Hazy Center, Eventually the program is planned to be disseminated to museums and science centers nation-wide</p>		