I. CHESTER COUNTY COMMUNITY FOUNDATION
GRANT PROPOSAL SUMMARY SHEET

One page only. This page will be shared electronically with Grant Committee Members & Fund Advisors.

Note: If Philanthropy Network Greater Philadelphia’s Common Grant Application is used, the CCCF's Summary Sheet MUST accompany application. To obtain an electronic version of this application, visit www.chescocf.org

Date:

Contact Information:

Organization Name: American Helicopter Museum & Education Center
Development Asso
Contact Name: Gregory Coin
Contact Title: Resource Development Asso
1220 American Blvd., West Goshen, PA 19830
Contact E-mail: gcoin@americanhelicopter.museum
Phone: 610-436-9600
Fax: NA
Website: www.AmericanHelicopter.museum
Year Incorporated: 1994

Has your nonprofit ever applied to the Community Foundation?
Yes ___ No___ Not Sure_x_

Has your nonprofit ever received funding from the Community Foundation? Yes ___ No_x_ Not Sure__

___Donor Advised Fund(s) ___Fund for Chester County ___Don’t know/Not sure

Field/s of Interest:

___ Arts, Culture & Humanities ___ Environment/Animal Welfare
_x__Education
___ Health ___ Human Services
___ Religion

Organization Information:
**Geographic Area Served** *(If not all of Chester County, specify primary Chester County regions served):*  
All of Chester County.

**Describe Population Served and Annual Number of People Served:** The project is directly benefit high school students in Chester County’s public and private schools.

**Mission:** Our mission is to **preserve** rotary wing history and innovation and to **educate** and **inspire** future generations in the STEM fields.

**Proposal Summary:** Funding to help 1) promote and adapt our extensive STEM (Science, Technology, Engineering and Mathematics) educational programs to public and private high school teachers and administrators in Chester County; and, 2) to identify new opportunities to utilize the Museum’s unique resources and expertise in the Chester County high school curriculum.

**If Capacity Building Proposal:**

___Mission, Vision & Strategy ___Governance & Leadership ___Strategic Relationships  
___Fundraising & Development ___Operations ___Other: Educational Outreach

**Annual Budget** $536,995

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Staff

___32___ % of budget for program expenses   ___17___ # of Board Volunteers  
___63___ % of budget for administrative expenses ___40___ # of Active Non-Board Volunteers  
___5___ % of budget for fundraising expenses ___4,000+___ # of Volunteer Hours

100 % total

Top 3-5 funding sources: Boeing Company, Sikorsky Helicopter Company, Piasecki International and several individual patrons

Grant Amount Requested from CCCF: $4,940
Chester County Community Foundation Proposal
Submitted by the American Helicopter Museum & Education Center

On behalf of the board if the American Helicopter Museum & Education Center (AHMEC) in West Goshen, Pennsylvania, I would like to request a $4,940 grant from the Chester County Community Foundation to 1) promote and adapt our extensive STEM (Science, Technology, Engineering and Mathematics) educational programs to public and private high school teachers and administrators in Chester County; and, 2) to identify new opportunities to utilize the Museum’s unique resources and expertise in the high school curriculum.

The American Helicopter Museum & Education Center had been originally conceived during a meeting in Philadelphia in 1993 to commemorate the 50th anniversary of the American Helicopter Society. In recognition of the unique history of the most important milestones and innovation of helicopter development in the Delaware Valley, the museum was founded following three years of planning, fundraising, artifact acquisition, and facility upgrades. The museum opened its doors to the public October 18, 1996.

Our mission is to preserve rotary wing history and innovation and to educate and inspire future generations in the STEM fields. To accomplish that mission, the Museum collects, preserves, researches, publishes, and exhibits the objects, artifacts and documents relating to the origins and development of rotary-wing aircraft (autogiros, helicopters, convert-a-planes and drones) in the United States for the benefit of the public, and uses this history to educate youth in the science fields. We are the largest aviation museum in the world dedicated exclusively to rotary-wing aircraft.

In 2012 the Boeing Company generously invested $50,000 to help museum staff and consultants design an extraordinary STEM curriculum for high school teachers in Chester County and southeast Pennsylvania. Completed in 2014, the comprehensive, in-class curriculum is 100% consistent with prevailing curriculum goals and priorities, and could easily become a national model for partnerships between schools and museums. However, we have had surprisingly limited success in integrating the curriculum into local school systems.

That’s all the more baffling considering the breadth and popularity of the onsite educational programs we have developed over the past twenty years (detailed program descriptions attached), including:

**Helicopter Hunt** - Pre-K through grade 1  
**Amazing Air!** - Grades 1-3  
**What a Drag: The Forces of Flight** - Grades 3-6  
**Helicopter Ground School** – Grades 6-10  
**Helicopter Aerodynamics** - Grades 11-12  
**Vertical Flight: Yesterday, Today and Tomorrow** - Grades 9-12  
**Women in Aerospace and Technology Program (WATP)** - an innovative mentoring program for girls in Grades 3-12 focusing on technology as a gateway into STEM careers
In a recent report published in Occupational Outlook Quarterly, analysts projected that by 2022 there will be more than a million new jobs in STEM-related fields and nowhere near enough trained personnel to fill them. There is no better place to develop aviation-based STEM programming than the “Cradle of Helicopter History” in the Delaware Valley, where Sikorsky, Piasecki, Boeing and Bell Helicopters all have major installations.

A significant issue in STEM Education is the growing shortage of highly qualified science and technology teachers, which puts ceilings on student achievement. Research findings show that in elementary classrooms today 38% of teachers lack full confidence in their qualifications to teach science. The American Helicopter Museum & Education Center (AHMEC) addresses the issue in a way that is unique, exciting and engaging. The Museum utilizes the scientific and technological innovation and ingenuity in helicopter design and development to teach and motivate teachers and prepare students in the STEM fields.

The ICSE program's purpose is to provide materials and instruction through teacher professional development that give reality and concreteness to scientific concepts of helicopter flight and to test student learning outcomes. ICSE Program material and instructional strategies are tailored to the abilities and aptitudes of Elementary and Secondary level learners.

The program focuses on AHMEC’s "Science of Helicopters" Program modules; including Amazing Air (Grades 1 -3), What a Drag! The Forces of Flight (Grades 3-6), Helicopter Ground School (Grades 7-9), Helicopter Aerodynamics (Grades 10-12) and the development of a new advanced Engineering Design module.

Despite the innovative and comprehensive curriculum that we have developed, it has been very challenging to identify and effectively communicate to the very high school teachers and administrators whose students would benefit from our major investment in STEM education. We owe it to our young people as well as the dedicated teachers in Chester County to find a way. For these reasons we are seeking funding from the Chester County Community Foundation.

We will use the grant funds to:

1. Create focus groups to introduce teachers and administrators to our STEM resources. Our first such event will be on October 1, 2015.
2. Create a Curriculum Review Board comprised of teachers, administrators and the museum’s education professionals.
3. Create publications and other communication vehicles to educate teachers and administrators to our resources and programs.
4. Design and fabricate teaching aids for high school teachers.
5. Develop, implement and analyze effective program evaluation tools.

This a one-time request, since we know that once educators discover the STEM resources and programs we have developed, they will become a permanent adjunct to the curriculum.
This important initiative will benefit Chester County directly and on multiple levels.

- **Chester County Students** - The availability of new and effective STEM teaching resources will benefit the thousands of high school students who will attend and graduate from Chester County Schools. Science, Technology, Engineering and Mathematics are ubiquitous in today's world. Whether these programs inspire students to pursue a career in STEM or not, all students will be avid consumers of STEM products. Enhancing a student’s knowledge of STEM subjects will prepare them to better handle the mathematics of tax forms and investments, make environmentally friendly decisions on fuel, automotive and appliance purchases, navigate the technological integration of smartphones, tablets and smart devices into everyday life and in many other ways succeed in our modern world.

- **Chester County Industry** - In 2009, the United States Department of Labor listed the ten most wanted employees. Eight of those employees were ones with degrees in the STEM fields: accounting, computer science, electrical engineering, mechanical engineering, information sciences and systems, computer engineering, civil engineering, and economics and finance. In Chester County those industries drive our local economy!

- **American Helicopter Museum** – AHM is the largest technology-related museum in Chester County and a major resource for local and regional teachers. A strong and expanding educational program will fuel the continued growth of this unique institution in several important ways. The increased interest in STEM education as it relates to aviation will drive attendance and membership growth. As a nonprofit any additional revenue will be re-invested into the program continuing.

The curriculum includes a comprehensive student evaluation component with pre- and post-visit evaluations, in addition to classroom and annual students testing that is part of all education today. In addition, the museum's education staff will survey teachers on a systematic basis to determine if and how the curriculum might be adjusted to make it more effective and to keep up with changing educational goals and priorities.

The qualifications of the professionals designing, implementing and evaluating the project are extraordinary. Their impressive professional resumes are included with this application.

Thank you for your time and consideration.