



Problem Solving with Wilbur and Orville, is a multidisciplinary curriculum for grades Prek-6 of standards-aligned videos, interactives, lesson plans, and more that partners the mission of the NAHF with the outstanding and proven educational expertise of PBS/ThinkTV. The program utilizes the Wright Brothers as informal guides to lessons within the curriculum as they interact with other famous aviation and space leaders from history to deliver fun, educational experiences for the classroom.

According to the U.S. Department of Education, “In an ever-changing, increasingly complex world, it’s more important than ever that our nation’s youth are prepared to bring knowledge and skills to solve problems, make sense of information, and know-how to gather and evaluate evidence to make decisions.” The aviation and aerospace industry has a particular vested interest. Industry leaders have been working for years to find solutions to relieve an ever-growing shortage of trained technical graduates to fill their growing and progressively multifaceted workforce. As educators, employers, and parents across the country explore strategies to fill the technology gap and equip students with the skills and knowledge they will need to be successful innovators in a 21st-century workforce, there has been a growing emphasis on STEAM — the educational discipline that engages students around the subjects of Science, Technology, Engineering, the Arts and Math.

However, attracting young learners into an appreciation for STEAM concepts and pursuing aviation and aerospace careers is not simple. Researchers have found that as children grow into teens, their interest and confidence in math and science often declines, especially among underrepresented groups. A situation exacerbated by the closure of schools and a move to remote learning by many districts nationwide in response to the Coronavirus pandemic. Early reports show students in grades K-12 who lack the internet, technology, and support needed to successfully engage in online learning are falling further behind their more affluent peers, widening long-standing achievement gaps.

The NAHF believes that a targeted aviation STEAM based early education program will address a vital gap. *Problem Solving with Wilbur and Orville* combines multiple resources including digital videos and interactives, classroom activities that bring science and history to life, and the invention of powered flight by the Wright Brothers in Dayton, Ohio. In addition, the curriculum folds in components that foster an appreciation of the nation’s extraordinary aviation legacy by honoring the exceptional individuals who led the way. Our goal is for students and educators to attain not only essential STEAM concepts but also a better understanding of the practical wonders of flight and inspiration to participate in incredible future achievements that spotlight America’s remaining air and space frontiers.

The NAHF recognizes for a monumental task such as this, there is no better partner than the outstanding and proven educational expertise of PBS.

Delivered through printed classroom curriculum guides, the NAHF website, social media, *PBS Kids* programming, and *PBS Learning Media* the program is designed to support teachers and inspire students both in and outside the classroom.



The *Problem Solving with Wilbur and Orville* curriculum includes:

- Curriculum binders distributed to the most underserved area classrooms through a partnership with Crayons to Classrooms (a free store for teachers from under-funded PreK-12 schools that serve students living in poverty.)
- Digital Studios and Interactives for PBS Learning Media
- A Discovering Flight PBS KIDS engagement page
- NAHF and PBS/ThinkTV Coordinated Social Media Campaign
- An interactive website to host content and engage young learners

Problem Solving with Wilbur and Orville is designed to let students learn by doing. An array of hands-on activities encourages students to build, fly, and conduct experiments with kites, soda-straw gliders, rubber-band-powered balsa planes, and more. It challenges them to not only take on a task or experiment but then also reflect on the results of their actions. Interactive games for individual and group play and short video segments for PBS learning media help solidify learning by providing fun and necessary repetition. The curriculum will also incorporate activities and lessons that support student's social-emotional growth by helping them learn to understand and manage emotions, set goals, show empathy for others, establish positive relationships, and make responsible decisions.

In addition to science, the curriculum provides lessons and activities in language arts, mathematics, and social studies. Journal writing, short story assignments, and comic book development projects are suggested as a means for students to bring the Wright Brothers' achievement to life and to use resources found at the NAHF. Every segment will encourage students to take a closer look at the life, legacy, and impact of famous pilots, inventors, and aerospace pioneers.

Our Partner-PBS- PBS is a membership organization that, in partnership with its member stations, serves the American public with programming and services of the highest quality, using media to educate, inspire, entertain, and express a diversity of perspectives. PBS empowers individuals to achieve their potential and strengthen the social, democratic, and cultural health of the U.S. PBS offers programming that expands the minds of children, documentaries that open new worlds, non-commercialized news programs that keep citizens informed on world events and cultures and programs that expose America to the worlds of music, theater, dance and art. It is a multi-platform media organization that serves Americans through television, mobile and connected devices, the web, in the classroom, and more.

Our Partner- Public Media Connect (PBS/ThinkTV)- Public Media Connect is the regional partnership of CET in Cincinnati and ThinkTV in Dayton that was formed in 2008. Comprised of three Community licensed Public Television stations (WPTD, WPTO and WCET) offering 13 channels, Public Media Connect continues to pursue a local distinctive educational, cultural, and informational mission in both communities. That mission, "to inspire and inform, educate and engage, fostering citizenship and culture, the joy of learning and the power of diverse perspectives," is unique in the national and local media landscape. Public Media Connect, which also includes the Southern Ohio Instructional Technology Association, serves a regional population of more than 3.5 million people, and is viewed by 1.8 million viewers each week across southwestern Ohio.