



**The Ongoing Journey:
Expansion of the Ohio Institute of Informal Science Education
at the Boonshoft Museum of Discovery**

The mission of the Boonshoft Museum of Discovery is to create and provide meaningful and entertaining learning experiences for curious minds to engage with natural history, science, and nature while honoring and preserving collections for future generations. With this mission in mind, the Museum **reaches approximately 250,000 children and adults annually**. This project takes place at the Boonshoft and has two components: the continuation of the Ohio Institute of Informal Science Education (OIISE) and an expansion of this Institute to include new offerings in the field of biology and natural sciences.

These initiatives collectively aim to maintain and enhance the existing OIISE, ensuring its ongoing availability as a valuable resource for educators, as well as broaden the scope of OIISE by incorporating new programs and content related to biology and natural sciences. By doing so, this expansion aligns with the goal of providing a more comprehensive and diverse range of educational resources to support science education in Ohio.

Launched by the Boonshoft Museum of Discovery in 2022 with previous state operating budget support, OIISE has emerged as a pivotal resource for Ohio educators. It provides teachers and staff with high-quality, peer-reviewed, and standards-based content sourced from a variety of Ohio museums and informal education institutions. This online platform, equipped with a user-friendly database, empowers educators to easily discover programs suited to their classrooms. By emphasizing virtual learning, OIISE bridges the accessibility gap, enabling Ohio students to explore STEM subjects, irrespective of their physical proximity to traditional educational facilities.

Students engaged in our programs have demonstrated a remarkable improvement, achieving up to a 40% increase in their standardized test scores. This notable enhancement can be directly attributed to their involvement in Boonshoft programs, which were aligned to state-standards and their curriculum. OIISE enables a wider distribution of these curriculum-aligned programs to a larger and more diverse audience.

The need: While our current focus revolves around aerospace and space science concepts, we recognize a growing need for lessons in biology and natural sciences. Our goal is to broaden the program offerings within OIISE, incorporating lessons on botany, conservation, ecology, microbiology, and zoology, among others. This expansion aims to ensure we continue to provide relevant, accessible, professionally curated, and standards-aligned content to educators and classrooms across Ohio's diverse communities.

Throughout this process, there have been a significant collaborative effort between Ohio's institutions, including WACO Air Museum, The National Museum of the United States Air Force, and the Armstrong Air and Space Museum. With additional funding, we can further expand into other regions and develop our database, including biology-centered partnerships with the Toledo Zoo and Cleveland Metroparks Zoo. By increasing the program offerings and footprint of the program, an additional **19,200 students** in Ohio would have the opportunity to participate in course offerings. Course offerings would increase by at least ten standards-based, peer-reviewed programs. This expansion aligns with our commitment to enriching STEM education and informal science learning in Ohio and beyond.

The request: We respectfully request \$600,000 in public funding to support this critical need for continuation and expansion of the Ohio Institute of Informal Science Education.



**MONTGOMERY COUNTY
ADMINISTRATION BUILDING**

451 West Third Street
P.O. Box 972
Dayton, Ohio 45422-1326

COUNTY COMMISSIONERS

Judy Dodge
Deborah A. Lieberman
Carolyn Rice

COUNTY ADMINISTRATOR

Michael Colbert

October 31, 2023

Dayton Development Coalition
1401 S. Main St.
Dayton, OH 45409

Dear Members of PDAC Committee:

We are writing in support of priority PDAC ranking for the Ohio Institute for Informal Science Education (OIISE), which is operated and curated by the Dayton Society of Natural History.

OIISE provides advanced high quality STEM education curriculum to schools and students. The project began with a Pilot Program focused on Aerospace curriculum in collaboration with The National Museum for the U.S. Air Force and Wright Patterson Air Force Base. The curriculum is aligned with the Ohio Education state standards and the Next Generation Science Standards.

OIISE was piloted in a previous state operating budget and has demonstrated significant results. Students participating in the project scored up to 40% higher on standardized tests, with participation in this curriculum being the only change.

The OIISE provides meaningful educational experiences for adults and children alike. They are also a leader in educational programming for children in Montgomery County and around Ohio. This institute is a critical resource for STEM students with a proven track record.

We urge your strong support for this request!

Sincerely,

Deborah A. Lieberman
Commission President

Judy Dodge
Commissioner

Carolyn Rice
Commissioner



Dear Members of PDAC Committee:

I write today in support of priority PDAC ranking for the Ohio Institute for Informal Science Education, which is operated and curated by the Dayton Society of Natural History.

OIISE provides advanced high quality STEM education curriculum to schools and students. The project began with a Pilot Program focused on Aerospace curriculum in collaboration with The National Museum for the U.S. Air Force and Wright Patterson Air Force Base. The curriculum is aligned with the Ohio Education state standards and the Next Generation Science Standards.

OIISE was piloted in a previous state operating budget and has demonstrated significant results. Students participating in the project scored up to 40% higher on standardized tests, with participation in this curriculum being the only change.

This institute is a critical resource for STEM students with a proven track record. I urge your strong support for this request.

As former public-school teacher, I recognize firsthand that programs like OIISE are critical to STEM related careers both now and into the future. With your support of this program, we can continue to build a workforce pipeline that will be beneficial to students and the Dayton region.

Sincerely,

A handwritten signature in blue ink that reads "Jeffrey J. Mims, Jr." The signature is stylized and cursive.

Jeffrey J. Mims, Jr.
Mayor, City of Dayton



October 30, 2023

PDAC Committee
c/o Tyler Clogg
Dayton Development Coalition
1401 S Main St Suite 200
Dayton, OH 45409

Dear Committee Members:

It has been a privilege to be part of the Dayton Development Coalition PDAC Quality of Life review panel for several years. I have seen projects come and go. Some projects are successful, and some are not executed. I know the committee works to identify a variety of projects that will advance our region. With Ohio's strong fiscal position and numerous funding opportunities on the horizon, I respectfully submit a letter of support for the Ohio Institute of Informal Science Education as submitted by the Dayton Society of Natural History.

The Dayton Society of Natural History (sometimes referred to as the Boonshoft Museum) secured state funding to seed the Ohio Institute of Informal Science Education. The project team started the pilot program with aerospace curriculum calling on Southwest Ohio partners such as the National Museum of the United States Air Force, WACO Air Museum, and Armstrong Air & Space Museum. The goal of the program is to provide advanced high-quality STEM education to schools aligned with the Ohio Department of Education state standards and the Next Generation Science Standards. Inventorying, promoting, and facilitating informal science education from museums and similar organizations have a multitude of benefits to the schools, museums, and education outcomes. Note in the project details, the Ohio Institute of Informal Science Education is already seeing higher test scores in their pilot program.

The National Aviation Heritage Alliance, the management entity of the Heritage Area, is pleased to support this request for additional funding. As an alliance of aviation heritage organizations, many of which develop aviation-related STEM education, this project supports NAHA's partners as they seek additional ways to share their informal science curriculum in the region and across the state. While not a capital project, I urge the committee to consider ranking this project and advance it to our state legislators for consideration.

Sincerely,

Mackensie Wittmer

Mackensie Wittmer
Executive Director
National Aviation Heritage Alliance

November 2, 2023

Chair, Priority Development and Advocacy Committee
1401 S. Main St., Suite 200
Dayton, OH 45409

Dear Chair,

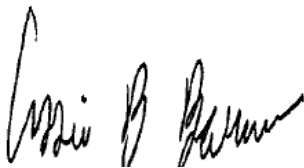
I'd like to highly recommend the Boonshoft Museum of Discovery PDAC project to enhance their Informal Education Project that supports their mission to create and provide meaningful and entertaining learning experiences for curious minds to engage with natural history, science and nature while honoring and preserving collections for future generations.

As you know, the Boonshoft Museum operates and curates the Ohio Institute for Informal Science Education. Through this programming, the Boonshoft provides advanced high quality STEM education curriculum to schools and students across Ohio. This important project began with a pilot program focused on Aerospace curriculum in collaboration with the National Museum for the US Air Force and Wright Patterson Air Force Base. The curriculum is closely aligned with the Ohio Department of Education State standards and the Next Generation science standards.

The Ohio Institute for Informal Science Education OIISE was piloted in a previous state operating budget and has demonstrated significant results. Students participating in the project scored up to 40% higher on standardized tests, with participation in this curriculum being the only change.

The Boonshoft plays a crucial role in our community and State by providing a meaningful educational experience for adults and children alike. The Boonshoft is unlike any other museum in the state because it houses a children's museum, natural history museum, planetarium, zoo, and science center. They are also a leader in educational programming for children in the Miami Valley and around Ohio and we need to support infrastructure updates to maintain facility excellence.

This institute is a critical resource for STEM students and has demonstrated a proven track record. I urge your strong support for this request.



Cassie Barlow, PhD
President, Strategic Ohio Council for Higher Education



Knowledge. Strength. Values.

INCREASES IN SCIENCE PROFICIENCY 2021-2023

	SCIENCE PROFICIENCY		
	2021	2023	Growth
Whitehall Preparatory & Fitenss Academy	15%	40%	25
Mt. Healthy Preparatory & Fitenss Academy	21%	43%	22
Northland Preparatory & Fitenss Academy	7%	28%	21
Harvard Avenue Performance Academy	3%	24%	21
Trotwood Preparatory & Fitenss Academy	17%	38%	21
South Scioto Performance Academy	38%	57%	19
Performance Academies (All)	22%	35%	13
Toledo Preparatory & Fitenss Academy	38%	50%	12
Middletown Preparatory & Fitenss Academy	40%	48%	8
Eastland Performance Academy	16%	23%	7
Springfield Preparatory & Fitenss Academy	34%	37%	3
Columbus Preparatory & Fitenss Academy	20%	22%	2
Columbus Performance Academy	19%	19%	0