



## **Senate Primary and Secondary Education Committee Battelle/Ohio STEM Learning Network – Proponent Testimony**

Thank you, Chair Brenner, Vice Chair Blessing, Ranking Member Fedor, and members of the committee.

I am writing to testify in support of the state of Ohio investing \$1.5 million annually in the Ohio STEM Learning Network.

Ohio's fastest growing industries require a strong STEM workforce. STEM professionals are needed in many critical, growing career fields that are vital to the state's future success - including healthcare, engineering, computer science, and manufacturing.

The workforce development pipeline must begin long before students pick a college. Career ideation begins in elementary school. America's business leaders realize that STEM education does not begin with an advanced computer science degree. Rather, it begins with early exposure to STEM.

STEM goes beyond science, technology, engineering and math. STEM is an approach to teaching and learning that will ensure our students and our future workforce have the critical thinking, collaboration, and communication skills needed to creatively solve problems and successfully compete in the global economy.

The Ohio STEM Learning Network is the state's best resource for improving access to and quality of STEM education for students across the state.

### **Investing in the public-private partnership**

Battelle applauds the proposed state investment in the Ohio STEM Learning Network. From the beginning, the Ohio STEM Learning Network set out to be a public-private partnership. Battelle's role has been to drive the project forward with the results-driven, fast-paced approach that guides our business. Now that the network has established itself, the State of Ohio can provide sustainability, an opportunity increase impact, and ongoing direction to align the work of the network with other state priorities. With this funding, the network will impact an additional 150 schools and 100,000 students each year.

### **Where Ohio stands**

The network has a proven track record of nurturing interest and participation in STEM. The Ohio STEM Learning Network began in 2008 with 5 designated STEM schools. Today it has grown to 79 designated STEM schools. The impact of this network goes beyond designated STEM schools. Educators in network schools collaborate with other schools in their region to scale STEM best practices further. In fiscal year 2020, the network provided STEM professional learning to 573 teachers across 164 Ohio public school districts reaching 63,000 Ohio students.

State funding ended in 2014, but Battelle's philanthropic support has kept the network moving forward. Battelle has contributed more than \$12.9 million to STEM education in Ohio, including support for the Ohio STEM Learning Network and philanthropy dedicated to K-12 STEM education programs in Ohio.

Interest in STEM is growing under the leadership of the Ohio STEM Learning Network. This year, more than 130 school leaders signed up for STEM designation information sessions.

In addition to providing technical assistance for the STEM designation process, the network grows interest in STEM through professional development opportunities created through external grants. Each of these programs have a competitive application process, further demonstrating a growth in STEM interest across the state.

All of these programs were modified this year to meet the demands of teachers and school leaders during the pandemic.

The network quickly adapted and transitioned its Computer Science teacher cohorts to a virtual format without losing quality of instruction. One teacher commented *"Last year I was in the in-person ...training and was afraid the virtual this year would lose quality. IT DID NOT. They did a great job, even with the virtual constraints."* Another teacher commented this was *"the best workshop that I have ever attended in my 25 years in education."*

The annual state-wide student design challenge, which identifies a pressing problem and challenges students to design and test solutions, was transformed to support schools virtually. Thousands of students across the state are currently considering how to "reimagine energy production or consumption" to improve their communities. This spring, students will come together through a virtual showcase highlighting the best student solutions from around the state.

Not only did the network shift gears with current programs mid-year, new programs were developed to support educators in making learning more meaningful. The network partnered with NASA to bring hands on NASA missions into the classroom. Throughout February and March, students across the state are learning the steps of the design process as they explore propulsion by launching foam rockets, design parachutes to protect eggstronauts on impact, and explore aeronautics with paper airplanes.

The COVID 19 pandemic has underscored the importance of STEM. Scientists in infectious diseases, computer scientists, and IT professionals have seen an increase in demand to solve problems created by COVID 19. STEM learning in primary and secondary school inspires students to pursue STEM careers and enhances students' capacity to use science and technology to solve problems. For Ohio to be a leader in scientific and technological innovation, all of Ohio's students must have access to STEM education that prepares them to tackle future global challenges.

### **What's next**

The Ohio STEM Learning Network is ready to do more. We believe Ohio can equip all students, from every community, with critical STEM skills that prepare them for success in career and life. Our plan will close the gaps in STEM skills across the state by scaling best practices beyond STEM schools into K-12 classrooms in every community. We have three priorities that align with the state's goals:

### **Priority 1: Expand STEM programs to all Ohio schools**

Expanding STEM programs for all Ohio schools helps educators teach in an increasingly problem-based and technical world. It helps administrators align school systems to facilitate interdisciplinary collaboration and create relationships with business partners. Professional development opportunities will be open to all Ohio educators and offered at no cost.

### **Priority 2: Create regional STEM supports to target underserved student populations**

About one of every six students lives in a rural Ohio school district. These rural regions have a unique set of challenges. With the state's investment in the network, we will develop a Rural STEM Collaborative to ensure students in rural communities have access to high-quality, innovative STEM instruction aligned with local career pathways.

### **Priority 3: Maintain and expand STEM school designation**

The Ohio STEM Learning Network has been supporting STEM school designation since 2008, collaborating with the Ohio Department of Education and the Ohio STEM Committee. A state investment in STEM would allow the network to provide more meaningful engagements with schools seeking to transform their buildings into STEM learning environments.

### **Prepared for the future**

Ohio has created the infrastructure to spread STEM education across Ohio through the Ohio STEM Learning Network. Long-term progress will require investment. Stronger STEM schools and programs across Ohio ensures our workforce will be prepared, competitive and ready to meet the challenges of the future.

I commend the Governor for adding this investment to STEM education into his budget proposal and urge you to support expanding quality STEM education for all Ohio students.

Thank you.