The Ohio STEM Learning Network Difference

44 Schools + More than 18,000 Students = One Powerful New Approach
For the Ohio STEM Learning Network, STEM is more than Science, Technology, Engineering, and Math. In the schools we represent, Ohio students are inspired to collaborate across disciplines to successfully solve real-world problems. That is the essence of STEM—students demonstrating knowledge by applying it to real-world situations.

Our schools are re-framing traditional career technical education (CTE) pathways to advance local economies, and their students’ futures, into the new millennium.

Battelle was a founding partner in Ohio’s first STEM school and drove creation of the network. Nearly a decade later, our company still proudly supports these schools for one reason: The STEM school model pairs career preparation with innovative teaching, college credits, credentials, and local business needs.

STEM schools must:
1) Enroll students under an open admissions policy (with no minimum test scores) and match the local community.
2) Create meaningful local partnerships with businesses, colleges, and the school district.
3) Use teaching methods based on real-world problems (including problem-based learning and design challenges).
4) Coordinate with the Ohio STEM Learning Network to facilitate the spread of innovation.

Leveraging state and federal CTE funding could bring this model to every state.

**STEM Means Integrating College and Career**

<table>
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<tr>
<th>Students earn college credits in high school</th>
<th>Students enrolled in college after graduation</th>
<th>STEM students make connection with businesses</th>
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</thead>
<tbody>
<tr>
<td><strong>12,000+</strong> College Credits</td>
<td>Most Ohio Schools: 70%</td>
<td><strong>81,000+</strong> Internship Hours</td>
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<tr>
<td>Saving students more than $7 million in estimated tuition costs</td>
<td>60% 70% 80%</td>
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<td></td>
<td>Ohio STEM Schools: 81%</td>
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<tr>
<td>Students majoring in college STEM degrees</td>
<td>Most U.S. Schools: 39%</td>
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<td>30% 40% 50%</td>
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<td>Ohio STEM Schools: 51%</td>
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Sources: Ohio Department of Education Report Card (September 2016); Survey of Ohio STEM Learning Network schools by Battelle (June 2017); U.S. STEM majors via National Science Foundation’s Science and Engineering Indicators - Appendix 2.16 (2014)
STEM Schools Serve All Types of Students and Provide More

Ethnically diverse students

Most Ohio Schools: 29%
Ohio STEM Schools: 39%

Most Ohio Schools: 50%
Ohio STEM Schools: 56%

Economically disadvantaged students

Graduation Rate

Most Ohio Schools: 82%
Ohio STEM Schools: 89%

ACT Score

Most Ohio Schools: 22
Ohio STEM Schools: 21

90% to 95% Graduation Rate:
Dayton Early College Academy
Dayton Regional STEM School
MC² STEM High School
Northwestern Local High School
Reynoldsburg (HS)² Academy

100% Graduation Rate:
Bio-Med Science Academy
Global Impact STEM Academy
Reynoldsburg eSTEM Academy
Metro Early College High School

24+ ACT Scores:
Metro Early College High School
Reynoldsburg eSTEM Academy

25+ ACT Scores:
Bio-Med Science Academy
Dayton Regional STEM School

Sources: Ohio Department of Education Report Card (September 2016) and survey of Ohio STEM Learning Network schools by Battelle (June 2017)

STEM Means Opportunity For All

STEM Students make connection with businesses

Source: Survey of Ohio STEM Learning Network schools by Battelle (June 2017)

STEM Schools Serve All Types of Students and Provide More

Unlike some school models, Ohio’s STEM schools do not screen out students with academic gaps or serve a small slice of the community. Students graduate from STEM schools at higher rates (89% vs Ohio’s average of 82%). STEM schools serve more economically disadvantaged and minority students, yet still post similar ACT scores.

The STEM School Experience Means Making Connections for Your Future

125,000+
Service Hours

STEM school students logged serving their communities

Through service learning, students build connection to their community and improve their resumes.

58%
of STEM Schools

joined #hourofcode to build computer science skills

Hour of Code is an annual campaign to recruit more schools to teach computer science created by Code.org.

100%
of STEM Schools

use inter-disciplinary design challenges with hands-on learning

Battelle recently hosted 106 students from Ohio STEM Learning to present solutions to the state’s opioid crisis.

Source: Survey of Ohio STEM Learning Network schools by Battelle (June 2017)
STEM means seeking partnerships with local businesses, colleges, and community groups.

To earn membership in the Ohio STEM Learning Network, schools must build partnerships with local leaders. We recently surveyed our schools and regional hub coordinators, to ask about their partners.

They responded with more than 300 names, including these large organizations:

Akron Children's Hospital
Akron Children's Museum
Akron Zoo
Battelle
Best Buy
Boys & Girls Club
BP
Cincinnati City Hall
Cincinnati Observatory Centre
Cincinnati Youth Collaborative
Cincinnati Zoo & Botanical Garden
Clark County 4-H Extension
Clark Planetarium
Dayton Development Coalition
Downtown Akron Partnership
Duke Energy
Farm Credit Services of Mid America
Fidelity Investments
First Solar
GE Aviation
GE Global Operations Center
GOJO
Goodyear Tire and Rubber Company
Grainger Industrial Supply
Great Lakes Science Center
Greater Cincinnati Foundation
Greater Cincinnati STEM Collaborative
Greater Cleveland Aquarium
Honda of America
IBM
Lubrizol
Mercy Health Systems
National Science Foundation
National Society of Black Engineers
Northrop Grumman
Ohio Dean's Compact
Ohio Department of Transportation
Ohio Farm Bureau Federation
Ohio Sea Grant Stone Laboratory
PAST Foundation
Perrysburg Rotary Foundation
Procter & Gamble
Rumpke
Scioto County Head Start
Scotts Miracle Grow
Siemens
Society of Hispanic Professional Engineers
Spectrum (Time Warner Cable)
Speedway
Texas Instruments
The Andersons
The Chamber of Greater Springfield, Ohio
The FFA Organization
The Greater Akron Chamber
The Ohio Corn and Wheat Growers Association
The Ohio Soybean Council
Toledo Botanical Garden
Toledo MetroParks
Toledo Zoo
Union County Chamber of Commerce
Upward Bound
Urban League of Greater Southwestern Ohio
Verizon Foundation
Vern Riffe Center for the Arts
Walmart Supercenter
Whirlpool
Wright Patterson Air Force Base Research Laboratory
Young's Jersey Dairy
YWCA

More than 100 colleges, universities, and K-12 schools including:

Bowling Green State University
Clark State Community College
Cleveland State University
Columbus State Community College
Northeast Ohio Medical University
Ohio State University
Sinclair Community College
University of Akron
University of Cincinnati
Wright State University