MINNESOTA STEM ECOSYSTEM

What is the Minnesota STEM Ecosystem?



A statewide, cross-sector network that connects education, industry, and community partners to expand STEM learning, create real-world experiences, and build Minnesota's future STEM workforce.



ALIGN LEARNING & WORKFORCE

BUILD STRONG PARTNERSHIPS

EXPAND STEM OPPORTUNITIES

ADVANCE EMERGING TECHNOLOGIES

INCREASE EQUITY & ACCESS

EDUCATION | INDUSTRY | COMMUNITY | WORKFORCE

MINNESOTA STEM ECOSYSTEM

Statewide Leadership. Shared Vision. Strong Partnerships.

A coordinated network connecting Minnesota's STEM partners

STEM Advisory Council

Cross-sector guidance and statewide STEM priorities



Minnesota STEM Ecosystem

Statewide coordination and strategic alignment

MINNESOTA DEPARTMENT OF EMPLOYMENT AND ECONOMIC DEVELOPMENT

DEED

Advancing Economic Growth and Workforce Development

Education

K–12, higher education, and out-of-school-time (OST)

Business & Industry

Employers, workforce partners, and industry leaders

Community Partners

Nonprofits, museums, civic and community organizations

MINNESOTA STEM ECOSYSTEM

Where STEM and CTE Connect

Integrated Learning. Real-World Skills. Minnesota's Workforce.



STEM Builds the Foundation

- Science & inquiry
- Technology & coding
- Engineering & design
- Mathematics & problem solving
- Creativity & innovation

STEM Learning

Builds foundational knowledge, critical thinking, and innovation skills.

CTE Pathways

Applies learning through hands-on training, industry credentials, and career pathways.

CTE Brings Learning to Life

- Hands-on, real-world experiences
- Industry-recognized credentials
- Work-based learning (internships & apprenticeships)
- Clear pathways to in-demand careers
- Skills aligned with employer needs

Together They Create Pathways to Minnesota's Workforce

Advanced Manufacturing | Agriculture & Food Systems | Information Technology | Health Sciences | Energy & Clean Tech | Aerospace & Drones | Construction & Skilled Trades | And Many More!

MINNESOTA STEM ECOSYSTEM

Statewide Vision. Regional Connections. Local STEM Opportunities.

Working through Minnesota's nine Regional Service Cooperatives

9 Regional Service Cooperatives

Established statewide delivery network





3 STEM Coordinator Pilot Positions

Housed within regional Service Cooperatives

Our Next Step

Expand regional STEM coordination as funding allows

Statewide STEM Ecosystem → **Regional Service Cooperatives** → **Local Schools, Employers & Communities**

Regional partnerships connect STEM learning to local workforce needs.



MINNESOTA STEM ECOSYSTEM

Building Minnesota's Future STEM Workforce

Preparing today's learners for tomorrow's high-demand careers



Growing STEM Workforce Needs

Advanced manufacturing, engineering, technology, healthcare, and energy.

Connecting Learning to Careers

Helping students see how STEM learning connects to real occupations.

Expanding Regional Access

Creating opportunities in rural and underserved communities across Minnesota.

Preparing for Emerging Technologies

AI, robotics, drones, virtual reality, and other rapidly changing technologies.

The future workforce begins with the STEM opportunities we create for students today.

MINNESOTA STEM ECOSYSTEM

Investing in Minnesota's STEM Future

Public Investment. Statewide Partnerships. Workforce Opportunity.



$1.5M
2026–2027 Legislative Investment

State investment in STEM learning and workforce development.

$700K+
Partnership Grants Awarded

Competitive grants supporting high-impact STEM programs statewide.

50+
Statewide STEM Learning Partners

Schools, nonprofits, higher education, museums, and industry collaborators.

3
Regional STEM Coordinator Pilot Positions

Building regional capacity with a plan to expand statewide as funding allows.

Connecting legislative investment to meaningful STEM learning and workforce experiences.

MINNESOTA STEM ECOSYSTEM

Five Strategic Investments. One STEM Workforce Future.

How Minnesota's legislative investment supports STEM learning and workforce pathways

STEM Career Exploration

Hands-on career awareness through site visits, panels, and interactive workshops.



Youth STEM Internships

Paid, real-world workplace learning and mentorship in in-demand and emerging STEM fields.



Robotics, Drones, VR & Emerging Technologies

Expanding access to robotics teams, drone programs, virtual reality, and other emerging technologies.



AI Professional Development for Educators

Building educator capacity to use AI tools ethically and effectively in the classroom.



Educator Industry Externships

Real-world industry experiences that give educators firsthand insight to bring workplace skills and relevant curriculum back to students.



>>> Connecting classrooms, communities and careers across Minnesota. <<<

MINNESOTA STEM ECOSYSTEM

Partnership Grants: Investing in STEM Opportunities



$701,000 PUBLIC PARTNERSHIP GRANTS

- $114,000 | STEM Career Exploration
- $149,500 | STEM Internships for Youth
- $80,000 | Educator Externships
- $93,000 | AI Pedagogy
- $264,500 | Robotics, Drones, VR & Emerging Technologies

$475,500 Matching Funds + $216,000 In-Kind Contributions

$1,392,500 | Combined Program Resources

MINNESOTA STEM ECOSYSTEM

Our Partners Bring STEM to Life!

A statewide network turning investment into opportunities for Minnesota students and educators.





Schools & Education

K–12 districts, higher education institutions, and Minnesota State Centers of Excellence.

STEM Learning Organizations

Science museums, robotics organizations, afterschool programs, and other nonprofit partners.

Business & Industry

Employers providing expertise, workplace experiences, mentorship, and industry connections.

Regional Service Cooperatives

Connecting statewide resources to regional education and workforce needs.

Public & Community Partners

Government agencies, community organizations, and other collaborators supporting access and opportunity.

50+
STEM Learning Partners

14
Partnership Grants

1
Shared Statewide Mission

No single organization can build the STEM workforce alone.
Together, we're creating opportunities across Minnesota.

MINNESOTA STEM ECOSYSTEM

Our Learning Partners

A Statewide Network Advancing STEM Learning and Workforce Development.

Science Museum of Minnesota®
Southeast Service Cooperative
ignite. AFTERSCHOOL®
SCIMATH MN
Greater Twin Cities United Way
United Way
DEPARTMENT OF EDUCATION®
MINNESOTA STATE Centers of Excellence
Code Savvy®
BAKKEN MUSEUM®
HIGH TECH KIDS®
EMPLOYMENT AND ECONOMIC DEVELOPMENT
UNITED STATES PATENT AND TRADEMARK OFFICE uspto
MINNESOTA FFA ASSOCIATION®
SkillsUSA MINNESOTA
hosa future health professionals minnesota
MINNESOTA 4-H® EXTENSION
Minnesota Service Cooperatives®
MTN MINNESOTA TECHNOLOGY NETWORK™
SCIENCE FROM SCIENTISTS®
create MPLS®
STEM FORWARD
NCAT NATIONAL CENTER FOR AUTONOMOUS TECHNOLOGIES®
STARBASE
Raspberry Pi Foundation®
mntech® Minnesota Technology Association®
MINNESOTA ACADEMY OF SCIENCE®
MASONIC CANCER CENTER UNIVERSITY OF MINNESOTA®
CTE TIP® Career & Technical Education Teacher Innovation Program
FCCLA MINNESOTA STATE ASSOCIATION
Minnesota Compass®
SparkPath®
MINNESOTA ZOO®
The Works Museum
MINNESOTA STEM PARTNERSHIP®
3000 FEET
bell museum®
FutureForward®
Northern Lights Collaborative for Computing Education UNIVERSITY OF MINNESOTA®
tpt®
NEW VISION FOUNDATION® FOR EDUCATION®
CS FOR MN Minnesota
Girls Dream Code®
SUMMIT ACADEMY
VEX ROBOTICS®
Junior Achievement®
STEM SUPPLIES®
MINNDEPENDENT®
MDI®
we share solar®
Minnesota WOMEN TECH®

Many Partners. One Connected STEM Ecosystem.

MINNESOTA STEM ECOSYSTEM

Our Impact

Real Opportunities. Real Experiences. Real Results.





12,147
Youth Engaged in Hands-On STEM Learning

3,938
Career Pathway Introductions & Exploration

316
Work-Based Learning Experiences

1,414
Employment Preparation or Work Readiness Activities

1,623
Postsecondary Exploration, Career Guidance, and Planning Activities

50 | Entered Employment

Hands-On Experiences That Build Minnesota's STEM Workforce

MINNESOTA STEM ECOSYSTEM

Educator Impact

Investing in Educators to Expand High-Quality STEM Learning Across Minnesota.



652 Educators Engaged



284 AI Educator PD

160 Engagements with Industry

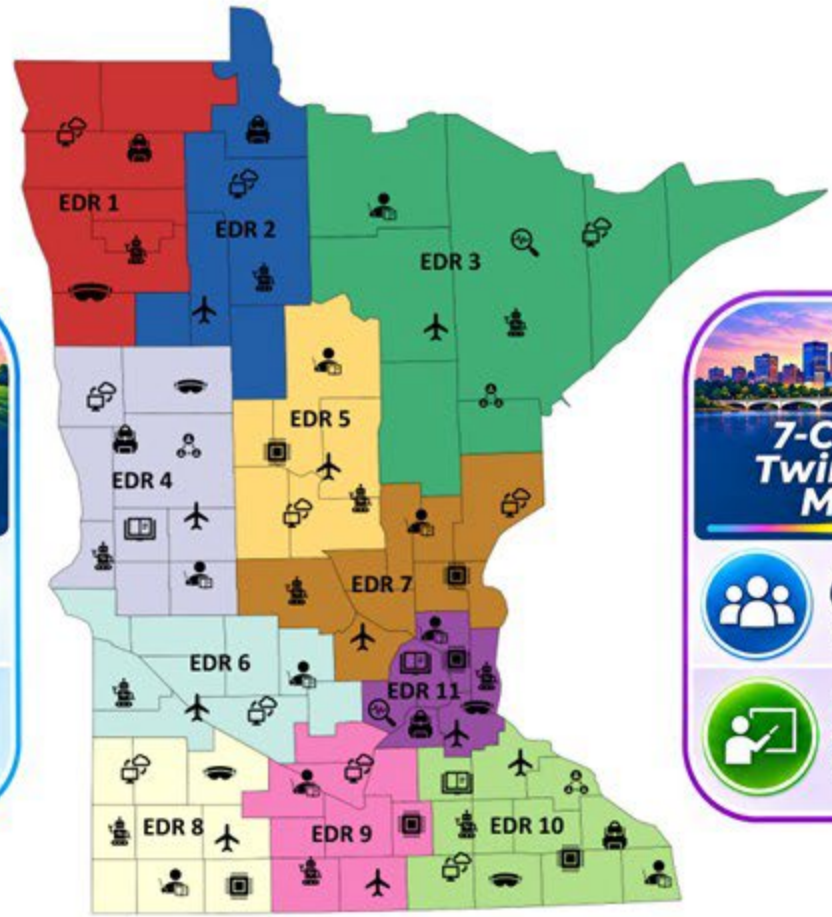
37 Industry Externships

Developing STEM-Literate, Workforce-Connected Educators.

MINNESOTA STEM ECOSYSTEM

Statewide Reach. Local STEM Opportunities.

STEM programming across Minnesota's Economic Development Regions



Greater Minnesota

7,163 *Youth*

438 *Educators*

7-County Twin Cities Metro

6,534 *Youth*

214 *Educators*

- Robotics
- STEM Youth Internships
- STEM Career Exploration
- STEM Learning and Lending Library
- Drones
- VR Learning Programs
- STEM Educator Externships
- AI/CS Pedagogy
- Micro-Electronics and Semi-Conductor Program
- Dedicated Regional STEM Coordinator

STATEWIDE PARTNERSHIPS · REGIONAL ACTION · LOCAL IMPACT

MINNESOTA STEM ECOSYSTEM

STEM in Action

From Classroom to Career



Manufacturing Your Success

ARC / Marvin Manufacturing

Warroad, Minnesota

Twelve students completed a summer advanced manufacturing internship, combining paid employment, technical instruction, and mentorship.

12 Paid Interns

8 Industry Credentials



Regional Micro-Internships

Southeast Service Cooperative

Southeast Minnesota

Students completed employer-based projects in biomedical research, agricultural science, healthcare technology, and communications.

9 Students

5 School Districts

Eight reported increased interest in STEM careers.



Youth Science Internships

Science Museum of Minnesota

Kitty Andersen Youth Science Center

Young people gained professional experience in museum departments, including exhibit fabrication, IT, AI applications, and data analytics.

18 Youth

6-Week Internships

Real-World STEM Experiences That Build Skills, Credentials, and Career Pathways.

MINNESOTA STEM ECOSYSTEM

STEM in Action

Bringing Emerging Technologies into Classrooms



Microelectronics & Semiconductors in the Classroom

MN State – Engineering & Applied Manufacturing Center of Excellence

Connected educators with industry partners Seagate and Polar to integrate semiconductor technology, workplace experiences, and real-world applications into classroom instruction.

8 Educators Trained



Raspberry Pi Conference for AI Educators

Minnesota

Educators participated in hands-on training to explore AI, machine learning, and practical classroom applications using Raspberry Pi tools and resources.

110 Educators Trained



Educator Industry Externships

Statewide

Teachers completed workplace experiences with Minnesota employers and contributed 144 hours of curriculum and lesson development, translating industry practices into classroom learning.

18 Teachers

575+ Industry Hours

Equipping Educators with the Tools, Experience, and Industry Connections to Prepare the Next Generation.

MINNESOTA STEM ECOSYSTEM

STEM in Action

Innovation Reaching Every Community



Science & Nature Conference

Lakes Country Service Cooperative

Fergus Falls, Minnesota

A regional science learning event drew students from multiple schools, with six additional schools placed on a waiting list.

640 Fourth- and Fifth-Grade Students



STEM Lending Libraries

Regional Service Cooperatives

Southeast Minnesota

A drone lending library reached 127 students through three educators in the July–September reporting period. Shared equipment helps schools access technology without purchasing everything individually.

127 Students Reached (Drones)



Technology Empowered Careers

Minnesota FFA

Students explored agricultural technology, engineering, equipment systems, and skilled trades through demonstrations and industry connections.

59 Students

24 Chapters

50+ Professionals

Expanding Hands-On STEM Opportunities in Schools, Communities, and Across Minnesota.

MINNESOTA STEM ECOSYSTEM

Advocacy & Collaboration



Connecting People. Building Partnerships. Shaping Minnesota's STEM Future.

Advisory Council

STEM Day at the Capitol

STEM Convening

Bringing Together Education, Industry, Government, and Communities to Advance STEM Across Minnesota.

MINNESOTA STEM ECOSYSTEM

A Shared Voice for Minnesota STEM

Advisory Council on STEM Learning & Workforce Development



CROSS-SECTOR LEADERSHIP

K–12, higher education, industry, nonprofits, state agencies & regional partners.

STATEWIDE STRATEGY

Align STEM learning, workforce pathways & regional needs.

COLLABORATION & GUIDANCE

Share resources, recommend systems improvements & expand access.

Meets approximately **3** times per year

Connecting Education, Industry & Communities to Shape Minnesota's STEM Future.

MINNESOTA STEM ECOSYSTEM

STEM Day at the Capitol

Bringing STEM Learning and Innovation to Policymakers



A Minnesota STEM Showcase at the State Capitol

Annual Event
Connecting Students, Educators, Industry, and Policymakers

30+ Organizations
Showcasing Hands-On STEM Learning, Career Pathways, and Workforce Opportunities

Interactive STEM Experiences

- Robotics Demonstrations
- Engineering Challenges
- Coding Experiences
- Career Exploration









A Powerful Opportunity to Elevate STEM Education and Build Support for Minnesota's STEM Future!

Demonstrating the Impact of STEM Learning, Workforce Development, and Career Pathways Across Minnesota.

MINNESOTA STEM ECOSYSTEM

Minnesota STEM Convening

Connecting Education. Industry. Community.







A Statewide Gathering to Advance STEM Learning & Workforce Pathways

70+ Leaders | Educators, Industry, Higher Education, Workforce & Community Partners

Featured Sessions

- Lean Leadership & Manufacturing
- Semiconductor Career Pathways (K–Grey)
- Regional Drone Programs for Learning
- Building Regional STEM Networks
- Aerospace Workforce Hub
- Legislative Update: Investing in STEM

2025 Convening Results:

- **92%** found the discussions valuable
- **100%** valued the legislative recap
- **100%** would attend a future convening

Building Partnerships, Sharing Innovation, and Expanding STEM Opportunities Across Minnesota.

MINNESOTA STEM ECOSYSTEM

What's Next for STEM in Minnesota?

Expanding Opportunities • Deepening Partnerships • Increasing Impact



Strengthen Regional STEM Networks

Expand and sustain Regional STEM Coordinators to convene partners, align with workforce needs, and grow local opportunities.

Grow Access to STEM Tools & Resources

Expand shared lending libraries and equipment access (robotics, drones, VR, and emerging technologies) across the state.

Deepen Educator–Industry Connections

Increase educator externships, AI professional development, and industry collaboration to bring real-world learning into classrooms.

Expand Career-Connected Learning

Grow internships, career exploration, and hands-on experiences that lead to in-demand, high-wage careers in Minnesota.

Scale What Works Statewide

Use data and partner feedback to replicate successful models, reach more priority populations, and ensure equitable access in every region of Minnesota.

A More Connected, Inclusive, and Future-Ready STEM Ecosystem for All Minnesotans.


MINNESOTA
STEM
ECOSYSTEM
Questions?
Let's Stay Connected!
Together, we can inspire the next generation of STEM innovators.
stemmn.org