

ACCELERATING THE WAY NEW YORK LEARNS & COMPETES

While much attention has been focused on the creation and unveiling of the regional economic development councils, the Empire State STEM Learning Network (Empire STEM) quietly builds steam. Empire STEM, a statewide, community-led collaborative, is aligning multiple STEM initiatives and committed stakeholders across New York—business, PK-20 education, government, community organizations, and foundations—to leverage the unique strengths of its 10 economic regions and drive economic growth.

Empire STEM envisions a coordinated network eventually consisting of 10 interconnected regional hubs, focused on common goals supporting the interdisciplinary teaching and learning of science, mathematics, engineering and technology (STEM) disciplines to prepare all students in their region for success in school, work, and life.

STEM is a key economic driver. And STEM education is particularly vital to helping New York businesses maintain their innovative and competitive edge. Businesses that recognize this are actively establishing collaborative relationships with schools in the communities they serve through empowering employees to engage in classrooms and labs, funding learning experiences for teachers and students, building awareness through media campaigns, and helping to form regional hubs of the statewide network.

“Corning Incorporated is keenly aware of the critical state of the STEM talent pipelines. As recent national surveys of business leaders indicate, the lack of qualified local talent is cited as a top barrier to future competitive leadership. Recognizing that our continued leadership in technological innovation is inextricably linked to this pipeline of STEM talent, we have actively partnered with the Schuyler, Steuben, Chemung, Tioga, Allegany BOCES and component school districts since 2005 on regional STEM programming for both students and teachers, stated Dr. Mark D. Vaughn, manager, technical talent pipelining, Corning Incorporated.

In New York’s technologically rich and diverse landscape STEM-skilled individuals are in high demand. According to the NYS Department of Labor, STEM careers in New York are growing 2.5 times faster than the non-STEM average. Yet, too few students are graduating from high school, too few are college-ready, and too few are prepared for STEM careers.

Active in reaching thousands of students and teachers through its national programs, in New York State, Siemens is playing a key role in establishing Empire STEM’s regional hubs in Central New York and the North Country, as well as in the statewide network design. “What is intriguing about the Central New York State HUB,” said Charley Cohen, national sustainability education director for Siemens Industry, Inc., “is the recognition that having an interdisciplinary STEM curriculum is important, but what is equally as important is how that curriculum is developed, initiated and administered. The level of input and commitment that teachers have in establishing the smart goals and materials that constitute the curriculum, how those teachers determine if students have mastered the materials through the use of

commonly developed assessments, and at what level mastery has occurred places the importance on what students have learned rather than on what they have been taught.”

“There is a strong, common understanding in the hubs that widespread student mastery of complex goals and objectives that form the basis of STEM curriculum will be achieved if the two tenets are blended, “ said Cohen. “To facilitate this change, hub members are focusing on establishing Professional Learning Communities (PLCs) that support teacher collaboration for the development of curriculum materials, common assessments and model lessons, as well as the sharing of experiences in the classroom with the goal of insuring that each child within the PLC will receive a ‘guaranteed viable STEM curriculum.’ This is a colossal effort that if successful, will provide the business community with the STEM professionals it needs to solve the complex technological, economic and social issues that we face. We at Siemens are proud to support this effort,” Cohen added.

In 2009, more than 500 stakeholders across New York engaged in a public and progressive dialogue on STEM education. Participants recognized the need to act now and act boldly to leverage existing assets, align multiple STEM initiatives, and advance New York’s STEM education if New York is to realize its full potential in the national and global economy. The result: Empire STEM was formed in 2010 as the organizer, advocate and accelerator to put the dialogue into action.

Margaret Ashida, director of the Empire STEM said, “A STEM-literate workforce skilled in trans-disciplinary, real-world problem-solving and critical thinking is essential for growth and prosperity in the 21st Century economy. Businesses are playing an important role in advancing a system of STEM education that must enable all students to earn a credential with economic value in New York State.”

There are several ways in which businesses—small, medium, and large—can get involved and help accelerate the change in how New York learns and competes:

1. Understand what STEM means to your industry and the communities you serve.
2. Empower employee engagement in the classroom and community, fund field trips, provide internships, recognize STEM certifications and hire STEM graduates.
3. Get involved. Help form a regional hub.

To learn more about the Empire State STEM Learning Network visit www.EmpireSTEM.org, follow it on Twitter @ <http://twitter.com/EmpireSTEM> and Facebook at <http://www.facebook/EmpireSTEM>, and join the new Empire State STEM Learning Network LinkedIn Group .

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