Strengthening STEM Programs via Community Partnerships©

Global Learning and Leadership (GL2) recognizes schools, park districts, and libraries as the "launching pad" for tomorrow's leaders, teachers, entrepreneurs, scientists, engineers, and manufacturers. A well-rounded education with an emphasis on STEM is important. Schools, park districts, and libraries are viewed by community members as a primary focus to be supported by local, public, private organizations, and industries. Once engaged, GL2 will immediately:

1. Initiate, direct, and grow two local advisory committees;
2. Credit partners throughout the community on program premises, in newspapers, local TV, widely viewed websites, and in numerous other creative, and effective ways of saying thank you!

Community Advisory Committee (CAC)

It will be chaired by a senior local official and includes school, park district and library leaders, teachers, and community and civic leaders. The CAC will work to explore, determine, and implement ways the community can support its STEM programs with a vision to make them the best in the Country. Community includes parents, educators, fire, police and similar public departments; local Chamber of Commerce; university sports teams; medical operations; service organizations, civic groups, and businesses large and small.

Industry STEM Advisory Board (ISAB)

It will be chaired by the leader of a well-respected local technology or engineering company and will include STEM Program leaders. The ISAB works to explore, determine, and implement ways of improving student interest in the STEM subjects in their schools and park district programs. The ISAB works vigorously to include representatives of as many of the STEM-based local businesses and organizations as possible.

Role of Industry
• Champion Teachers
• Instill STEM Appreciation
• Showcase Careers
• Broaden Horizons
• Impart Skills, Knowledge, and Capabilities

ISAB and CAC Driven Ideas Proven Effective in Different Communities

Supplement STEM Curricula with Real Applications

Identify topics within the STEM curricula where partners (e.g. a city engineering or planning department) have real life applications that can enhance and reinforce subject matter. Offer live and/or virtual class field trips. Educators, students, and parents are generally unaware of exciting STEM activities ongoing in their local community. Community STEM work exposure is also accomplished by partnering with GL2 education programs.
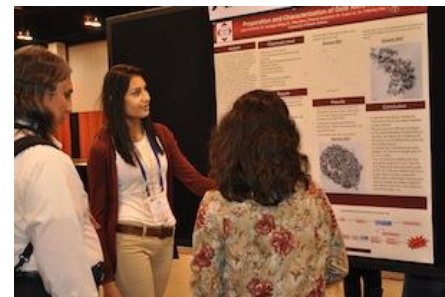
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Invest in Parents and Teachers

It's impossible to strengthen school and park district programs without the active participation of parents and teachers. Family nights include great food, entertainment, and short expressions of the fun and satisfaction associated with STEM careers. Teachers, administrators, and park district instructors socialize with student families in an informal, relaxed atmosphere.
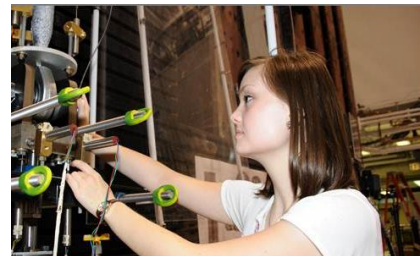
Champion Teachers

The private sector faces none of the rigid limits placed on the public sector as to how and how much they can incentivize and motivate teachers. Like everyone, teachers appreciate cash awards for exemplary work. There's nothing iniquitous about appreciation checks from local companies for teachers who work to make their students and STEM Program Clubs STEM strong.

Employ STEM Teachers

Teachers, park district instructors, and library staff must often work second jobs. STEM - based companies have a unique opportunity to provide them valuable real STEM experience, which translates directly to their students. If a STEM – based company hires part-time help, why not make it STEM teacher(s)?

Hold Teacher Exclusive Open House Events

All organizations doing STEM work (local, regional, within the state, and nationally) share their experiences and applications with local teachers who always pass the experience gained on to their students. Good teachers are a community's most valuable asset. Treat them special with <u>exclusive</u> teacher only open house events emphasizing unique opportunities and experiences.

Demonstrate STEM Applications in Schools and at the Park District

Communicate your tech product(s) with emphasis on the use of mathematics, science, engineering and technology. Show the satisfaction of skilled employees. Provide a child-friendly employee to interact with students during school hours, during the after-school program, and visit classrooms upon requests. If many different companies participate, students gain a knowledge of the diversity of STEM careers and of the economically important work ongoing in their community.

Celebrate STEM Successes

Partners should meet with each other periodically to visualize and understand the scope of the ongoing community interaction between the schools, park district programs, and the public and private local STEM entities.

Recognize STEM Successes

Achievements must be acknowledged. Standout students, teachers, activities, partners, and partnerships must be noted at the above celebrations and publicized through the media including social media. Noting successes is important for schools working towards an outstanding National STEM Model School Designation.

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Support Extracurricular STEM Activities
Science clubs, science fairs, STEM competitions like FIRST™ and similar activities that produce real student enthusiasm and engagement require strong community partner participation to succeed.

Donate Equipment, Hardware, and Technology
There never was a program that couldn't use learning tools like large screen monitors, white boards, computers, software, science equipment, supplies, and anything and everything to facilitate STEM learning. STEM entities make contributions when donating new or no longer needed items on teacher "want" lists.

Offer STEM Class and Club Field Trips
Live field trips are best, but when impractical, interactive (two-way communication) virtual field trips are the next best thing. An advantage of virtual trips is that they can simultaneously involve multiple schools, park district programs, and project teams.

Companies Broaden Student's Perspective
Informal sessions allow companies to show STEM Program participants exciting lucrative opportunities awaiting them in the broader community if they apply themselves to obtain the required education and training.

Make Room for Student Internships
The opportunity to win internships with local STEM company operations provides participants with a great incentive for excelling in school courses and park district programs. It also gives the hiring entity an early look at potential future hires. This is a win-win for both the participant and the company.

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"Adopt a Class"

A public/private STEM-based organization can make a major positive impact on students by allowing them input on a real project (e.g. bridge construction, river water quality monitoring. Allow participants to experience and input on engineering, materials analysis, environmental impact, budgeting; in short, all aspects of a real project close to their home. Emphasize how math, chemistry, physics i.e. STEM subjects enter into real world work.

Initiate Junior Tech Programs

"Adopt a Class" can be adapted to individual participants. Company employees or retirees, in a one on one relationship, support students that display special interest in STEM. Support is multifaceted and informal. Ideas include working together on STEM homework, advising on science project(s) applying math concepts, enabling the student to see work at a laboratory or plant location, and advising on courses and colleges.

Recruit Community Nonprofit Organizations

Rotary, Lions, and Kiwanis and similar clubs have a long history of helping schools with volunteers, fundraisers, and through valuable connections. Different clubs often "adopt" a different school program (drama club, sports team).

After School Program (ASP) Volunteers

Company employees/retirees are critically important to ASP's. They provide presence as a caring adult, assist with homework, and participate in other after school program activities. Skilled volunteers are needed for the arts and crafts (music, ceramics, dance, etc.); information technology including coding classes; technical education classes leading to apprenticeships, certifications, and job opportunities; and any other learning activities that occupy children and enhance their physical and well-rounded education.