

PROJECT 10 TOPICAL BRIEFS are published on a bi-monthly basis. Each issue focuses on a specific topic or theme, highlighting current and upcoming information and events related to secondary transition. This month the Topical Brief is focused on School-Based Enterprise.

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Science, Technology, Engineering and Math (STEM) -Related School-Based Enterprise (SBE) Mini-Grants

Project 10 invited all Florida school districts to submit a letter of intent to apply for a STEM-related school-based enterprise (SBE) mini-grant. SBEs offer a unique approach to learning and career preparation. Benefits allow students to do the following:

- Deeply embed academic concepts through use in "real world" activities



- Build self-confidence, self-sufficiency and decision-making skills
- Develop verbal and social skills
- Use their unique abilities in an entrepreneurial setting
- Learn employment skills such as collaboration, time management and organization
- Find meaningful post-school employment

Project 10 anticipates that three school districts/schools will be funded to enhance an existing SBE or launch a new SBE. The maximum amount of these mini-grant awards will be \$3,000.

Billion Oyster Project: Reviving New York Harbor

New York City's middle school students are participating in the Billion Oyster Project's Curriculum and Community Enterprise for Restoration Science (BOP CCERS). This project, funded by a three-year grant from the National Science Foundation (NSF), is a program that aims to restore one billion oysters to New York Harbor. STEM learning opportunities for students throughout the New York City public school system are expanding in number and in scope.

Although this project is not strictly an SBE, there are many ways that an enterprise could be added to this meaningful and innovative curriculum. Some ideas include:

- Create a quarterly newsletter to share about the important environmental activities taking place in the project.
- Produce project-related t-shirts, photographs, or other products to raise funds for the project.

Watch the video below to see how the Billion Oyster Project is giving middle school students in urban New York a chance to understand and care about their world in a whole new way. Don't miss the reactions of these middle school students; they are priceless.



<https://www.youtube.com/watch?v=jby7T0y436E>

STEM's Beginnings: How Did the STEM Emphasis Get Started?

A short history of STEM is helpful to understand its ongoing importance in education. An emphasis on science and math began in the United States in the early 1980s in response to reports that students in America were being outperformed by students in numerous other countries in the subjects of math and science. Bringing about educational reform was slow, and it wasn't until the early 2000s that persistent low test scores in the math and science fields stimulated more resolve to ensure that the United States would remain globally competitive and the adoption of STEM courses picked up momentum.

In 2007, a report entitled *Rising Above the Gathering Storm* portrayed STEM skills as the key to success for all students in the 21st century. The recommendations of this report included:

1. Increasing the talent pool through improving K-12 science and mathematics education.

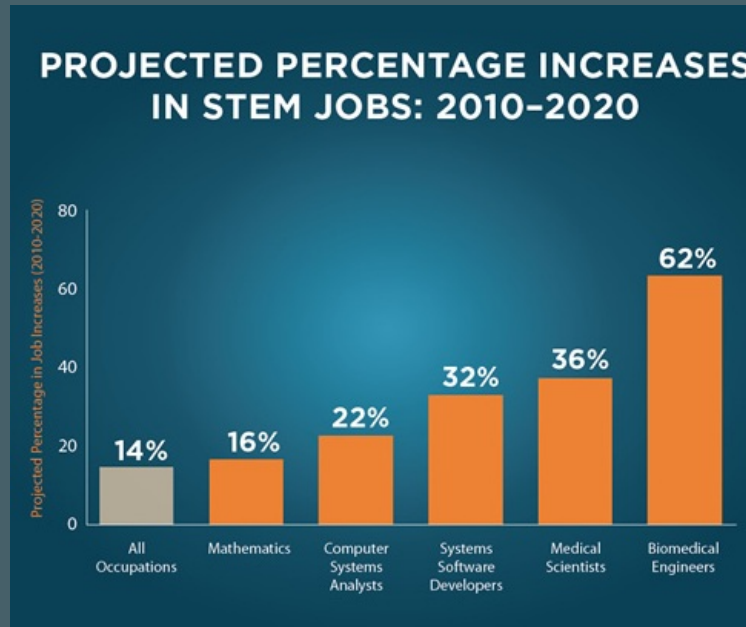
2. Sustaining and increasing long-term basic research related to the economy, security and quality of life.

3. Increasing the attractiveness of the United States to recruit and retain the best and brightest scientists and engineers in the world.

4. Increasing incentives for innovation (Committee on Prospering in the Global Economy of the 21st Century, 2007).

The National Assessment of Educational Progress (NAEP), a project of the federal Education Department, reviewed math proficiency gains during the period of STEM emphasis. From 2000 to 2013, eighth grade students showed a 5% increase in students scoring at the proficient level in mathematics and an 11% decrease in students scoring "below basic" during the same time period. While fewer students are scoring below basic, the gains in students scoring in the proficient and advanced levels seem to have stalled and prior to 2015, even showed a small decrease (PEW Research Center, 2017).

Explanations for the drop in math and science scores in 2015 are varied and are not necessarily in agreement. The previous Secretary of Education, Arne Duncan, commented on the NAEP dropping scores in 2015, "I've said on a number of occasions that we should expect scores to bounce around some. This is really hard work and big change rarely happens overnight." Some point to the lack of consistency between how STEM is taught and how STEM is performed in real life situations. This idea is explored in the next segment.



Desilver, D. (2015). *U.S. students' academic achievement still lags that of their peers in many other countries*. Pew Research Center. Retrieved from <http://www.pewresearch.org/fact-tank/2017/02/15/u-s-students-internationally-math-science/>

University of Massachusetts Donahue Institute. (2011). *Increasing student interest in science, technology, engineering and math (STEM): Massachusetts STEM pipeline fund programs using promising practices*. Boston, MA: Author. Retrieved from <http://www.mass.edu/stem/documents/Student%20Interest%20Summary%20Report.pdf>

School-Based Enterprise: A Natural Opportunity to Strengthen Connections to Real Life

Those in strong support of STEM studies have voiced concerns about the lack of growth in levels of student interest in STEM subjects, particularly in math. Students may not be making the connections that establish relevancy between STEM and their lives. Additionally, the lack of innovation in STEM teaching practices is problematic. "The way STEM is taught is often much different than the way STEM is done," observed Breiner, Harkness, Johnson and Koehler (2012).

Because strengthening the connections between STEM and real life applications could be a key factor in the way students perceive, value and integrate STEM, utilizing STEM-related SBEs with STEM-related curriculum is a logical step.

The way STEM is taught is often much different than the way STEM is done.

A study completed by the National Center for Women Information and Technology (NCWIT) and commissioned by the Girl Scouts of America sought to identify promising practices that demonstrate evidence of increasing girls' interest in STEM. The following three promising practices were identified in this study:

- Hands-on learning activities
- Projects having real life context and relevance
- Opportunities for collaborative work

SBEs are, by design, well-equipped to exercise these practices. SBEs incorporate planned curriculum that is learned through hands-on activities in an environment that provides collaborative work with students of all ability levels, teachers and community members for the purpose of designing, producing and/or marketing services, merchandise or messaging that results in financial and educational profit.

Breiner, J. M., Harkness, S. S., Johnson, C. C., & Koehler, C. M. (2012). What is STEM? A discussion about conceptions of STEM in education and partnerships. *School Science and Mathematics*, 112(1), p. 3-11. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1949-8594.2011.00109.x/abstract>

University of Massachusetts Donahue Institute. (2011). *Increasing student interest in science, technology, engineering and math (STEM): Massachusetts STEM pipeline fund programs using promising practices*. Boston, MA: Author. Retrieved from <http://www.mass.edu/stem/documents/Student%20Interest%20Summary%20Report.pdf>

<p><u>Aquaponics: Citrus High School, Perris, California, Wins Award</u></p>	<p>Read about how this California high school uses aquaponics to help provide sustainable food sources for their community.</p>
<p><u>Distributive Education Clubs of America (DECA)</u></p>	<p>DECA prepares emerging leaders and entrepreneurs for careers in marketing, finance, hospitality and management in high schools and colleges around the globe.</p>
<p><u>Entrepreneur</u></p>	<p>Sections on the website include Startups, Run and Grow, Money, Marketing, Technology, Franchises. There are also many videos and information on special projects. Individuals can also submit questions.</p>
<p><u>Guide to Developing Collaborative School-Community-Business Partnerships</u></p>	<p>The guide focuses on approaches, policies and strategies necessary to facilitate effective collaborative partnerships that result in a job and a clear career path for students and youth with disabilities. Collaborating partners also reap benefits from these partnerships, such as, the opportunity to prepare the future workforce.</p>
<p><u>Job Accommodations Network (JAN): Entrepreneurship</u></p>	<p>JAN provides individualized technical assistance, consulting and mentoring services to individuals with disabilities, family members and service providers.</p>
<p><u>Marketing and Hospitality/Tourism School-Based Enterprise Manual and Resource Guide</u></p>	<p>This guide was recently developed by the Georgia Department of Education to assist teachers and administrators to make informed decisions about what kind of SBE to initiate and how to operate it.</p>
<p>Project 10 Website <u>Regional Transition Representatives</u></p>	<p>Project 10 Regional Transition Representatives can provide training and technical assistance in developing a SBE. For more information, <u>contact</u> your local representative.</p>
<p>Project 10 Website <u>Scope and Sequence</u></p>	<p>Project 10 has developed a scope and sequence to support teachers implementing the employment/entrepreneurship course: 7980040 Preparation for Entrepreneurship/Self-Employment. Additional employment-related course scope and sequences may be found on Project 10's A-Z Library and Student Development <u>webpages</u>.</p>
<p>Project 10 Website <u>School-Based Enterprises</u></p>	<p>Connect to more information about launching SBEs and information about existing SBEs in your area.</p>
<p><u>School-Based Enterprise: Career Activity File</u></p>	<p>The Oklahoma Department of Career and Technology Education provides this rich resource containing information about actual school-based enterprises (SBEs) with a brief file on each enterprise with its core subject relation, curriculum resources and enterprise description.</p>
<p><u>SCORE</u></p>	<p>SCORE is a nonprofit association dedicated to helping small businesses get off the ground, grow and achieve their goals through education and mentorship. SCORE offers online mentoring and workshops and the website has a section dedicated to "Templates and Tools." Find</p>

a regional chapter on the SCORE chapters map [here](#).

[Who's Minding the Store? A Guide for Educators Working with School-Based Enterprises: Activities and Strategies for Creating and Operating Innovative and Productive Learning Experiences](#)

The guide provides tools and strategies that should help teachers answer two essential questions:

1. How can we establish and operate a school-based enterprise (SBE) which provides a context for students to learn a range of academic and career-oriented skills?
2. How can we provide a meaningful experience for students in an SBE that is already up and running?

Downloads of each section of the guide are available [here](#).



Upcoming Events

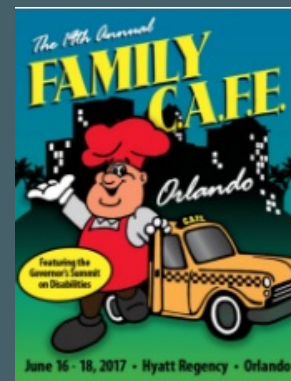
The 19th Annual Family Cafe

June 16-18, 2017
Hyatt Regency Orlando
Orlando, Florida

The Annual Family Cafe brings together thousands of individuals with disabilities and their family members for three days of information, training and networking each June. The conference includes individual breakout sessions, an Exhibit Hall with dozens of vendors, keynote speakers and opportunities to network with families as well as agency professionals.

The Family Cafe remains committed to connecting attendees with information and resources at minimal cost, so there is no registration fee for individuals with disabilities and their family members.

Online registration is now open. Follow this link to [register](#).



The Florida Consortium on Inclusive Higher Education's Summer 2017 Institute

July 13, 2017
Live Oak Event Center
Orlando, Florida

Registration is now open for the Summer 2017 Institute: Florida's College Horizons for Students with Intellectual Disability. This institute is designed to give secondary school administrators and teachers information on postsecondary opportunities

available for their students with intellectual disabilities, specifically attending inclusive institutions of higher education and what steps should be taken prior to applying for admission to these institutions. This institute will be in Orlando on July 13, 2017. In-service points and opportunities for travel-support funding are available. Registration is at no cost and there are only 90 spots available, so register early.

Click [here](#) to register.

View travel-request documents [here](#).

Questions? Contact Ilisa Patterson (ilisa.paterson@ucf.edu) or (407) 823-1098.



Upcoming Webinars

Think College Spring 2017 Research Summit

Wednesday, June 7, 2017

2:00 - 3:30 pm ET

Register [here](#)

This Summit will focus on doctoral student research, with two presenters sharing their successfully completed dissertations. Discussion will include areas of needed research and lessons learned in designing and conducting dissertations on inclusive higher education. Participants will have the opportunity to direct questions to the featured speakers and engage in conversations with the research summit community.

Seb M. Prohn, Ph.D., will present "A Grounded Theory of Social Inclusion for Postsecondary Education Students with Intellectual Disability." In this multi-method study, college students with I/DD served as participant evaluators collecting and sharing data to describe their social experiences in a campus community.

Students presented social inclusion as a function of belonging and attributed worth within context, and they described the most supportive PSE contexts for inclusive social experiences.

Lyndsey Nunes, Ph.D., will present "Promoting Self-Determination Skills of Individuals with Intellectual Disabilities Participating in the Inclusive Concurrent Enrollment Initiative Programs throughout Massachusetts." The purpose of this evaluative research study was to examine and understand the functional components of fully inclusive postsecondary education programs that promote self-determination for students with intellectual and developmental disabilities and to differentiate among the MA ICEI programs that include or do not include these components.

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About Project 10 Topical Briefs:

Project 10 Topical Briefs provide informational summaries and resource links related to secondary transition.

Have a question? Want to find or recommend a resource? Have some great news to share?

Email us at project10@stpete.usf.edu.

For back issues of Project 10 Topical Briefs, visit the newsletter page on the Project 10 website at <http://www.project10.info/Newsletter.php>.

Project 10: Transition Education Network

Assists Florida school districts and relevant stakeholders in building capacity to provide secondary transition services to students with disabilities in order to improve their academic success and post-school outcomes.

Project 10: Transition Education Network University of South Florida St. Petersburg

Questions or comments?

Email us at project10@stpete.usf.edu.

www.Project10.info