




Addressing STEM talent development for Florida's future

Voluntary Public School Choice Summer Summit

June 16, 2010

Workforce CDEF

Florida will be a leader in market relevant STEM talent development and retention www.STEMflorida.net



Addressing STEM talent development for Florida's future

Defining the Need

15 of 20 fastest growing occupations through 2014 will require substantial math & science preparation.

US Bureau of Labor Statistics

Yet fewer than half (42%) of all 12th graders take at least 1 upper-level math course, while just over a quarter (27%) take upper-level science courses.

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Defining the Need

9 of Florida's top 10 paying occupations are STEM related.

Florida Research and Economic Database (FRED)

Occupation Title	2009 Annual Median Level Wage
Physicists	\$158,867.40
Podiatrists, General	\$154,165.65
Doctors, General	\$151,854.41
Airline Pilots, Coaches, and Flight Engineers	\$119,023.54
Air Traffic Controllers	\$118,802.01
Gen. Managers	\$115,361.13
Engineers, Mechanical	\$113,338.26
Computer and Information Systems Managers	\$113,044.54
Podiatrists	\$110,255.21
Documentalists	\$107,829.98

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Programme for International Student Assessment (PISA)

Seeks to measure how well young adults, at age 15 can use their knowledge and skills to meet real-life challenges, rather than merely the extent to which they have mastered a specific school curriculum.

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PISA Mathematics 2006:
OECD nations scoring measurably above the USA

Country	Score
Finland	548
Korea, Rep. of	535
Netherlands	530
Switzerland	525
Canada	520
Japan	515
New Zealand	510
Belgium	505
Australia	500
Denmark	495
Czech Republic	490
Poland	485
Austria	480
Germany	475
Sweden	470
Ireland	465
OECD average	498
France	490
United Kingdom	485
Poland	480
Slovak Republic	475
Hungary	470
Luxembourg	465
Portugal	460
United States	474

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PISA Science 2006:
OECD nations scoring measurably above the USA

Country	Score
Finland	563
Canada	535
Japan	530
New Zealand	525
Australia	520
Netherlands	515
Korea, Rep. of	510
Germany	505
United Kingdom	500
Czech Republic	495
Switzerland	490
Austria	485
Belgium	480
Ireland	475
Hungary	470
Sweden	465
OECD average	500
United States	485

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"If the United States had in recent years closed the gap between its educational achievement levels and those of better-performing nations such as Finland and Korea, GDP in 2008 could have been \$1.3 trillion to \$2.3 trillion higher. This represents 9 to 16 percent of GDP."

*The Economic Impact of the Achievement Gap in America's Schools
McKinsey & Company. (2009)*

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FCAT Math

2009 Grades 3-10 Performing on Grade Level and Above (Math)

- In 2009, over 2/3 of the districts in Florida had fewer than 68% of their Grade 3-10 student population performing on grade level and above in mathematics.
- Only 8 districts had at least 74% of their Grade 3-10 student population performing on grade level and above in mathematics.

Data Source: Florida Department of Education

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FCAT Science

Percent of students at or above grade level

Grade	Percent, %
5	46%
8	41%
11	37%

Data Source: Florida Department of Education. (2009d).

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Percentage of Florida high school graduates entering Florida's community colleges that require remediation

Mathematics – 44%
Reading - 32%
Writing – 27%

*at post-secondary institutions based on entry-level tests, 2007 (CPT, SAT-I, ACT)

Data Source: Florida Department of Education. (2009). Florida Public High School Graduates: State Summary by Type of Institution Attended.

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High School Advanced Placement (AP): Florida exceeds the nation overall, but not in math & science

Percent of all 2008 graduates scoring 3 or above on one or more AP exams during high school

Subject	USA (%)	Florida (%)
Art	~2	~3
Language	~4	~5
Science	~5	~6
Math	~6	~7
English	~8	~10
Social Science	~10	~12
All exams	~12	~15

Source: CollegeBoard, The 5th Annual AP[®] Report to the Nation: Florida Supplement.

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Our Solution

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STEM Education Conference

July 25 – 27
Buena Vista Palace Hotel & Spa

Bringing business/industry, education, workforce & economic development and policy makers together to develop a statewide STEM strategy.

Register at www.STEMflorida.net

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STEM Education Conference

Sunday, July 25
Welcome Reception

Monday, July 26
Framing the Issue
Awards Luncheon
Where are We?
Creative Solutions

Tuesday, July 27
Expanding the Pipeline
A Broader Perspective
Developing the Plan

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STEM Education Conference

Awards Program

- Business Education Partnership
- Increased Student Outcomes
- Barrier Buster
- Excellence in Instructional Staff Development

Nomination forms and conference information at www.STEMflorida.net

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STEM Activities

- Teacher Externships
- Student Internships
- STEM Awareness Campaign
- Web Portal

Workforce CFEF

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Partnership

STEM*florida* is based on the concept that addressing STEM education is too important to be left to educators alone. Businesses, economic and workforce development organizations and all other STEM stakeholders must work together to successfully meet the STEM talent development challenges ahead of us.

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Questions?

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