

# Women and the Economy: Women and STEM

Dr. Rebecca M. Blank  
Acting Deputy Secretary of Commerce  
and  
Under Secretary for Economic Affairs





# Why Women and STEM?

## (Science/Technology/Engineering/Math)

- STEM jobs are growing faster than non-STEM jobs.
- The specific skills embodied in STEM education are especially valuable to our economy and to the innovative process.
- The U.S. has fallen behind several other countries in STEM education.
- Women are seriously underrepresented in these job areas.

# Example: STEM occupations

## Computer and Math

- Computer programmers
- Computer software engineers
- Network and computer systems administrators
- Mathematicians
- Statisticians

## Physical and Life Sciences

- Agricultural and food scientists
- Astronomers and physicists
- Medical scientists
- Environmental scientists and geoscientists
- Geological and petroleum technicians

## Engineering and surveying

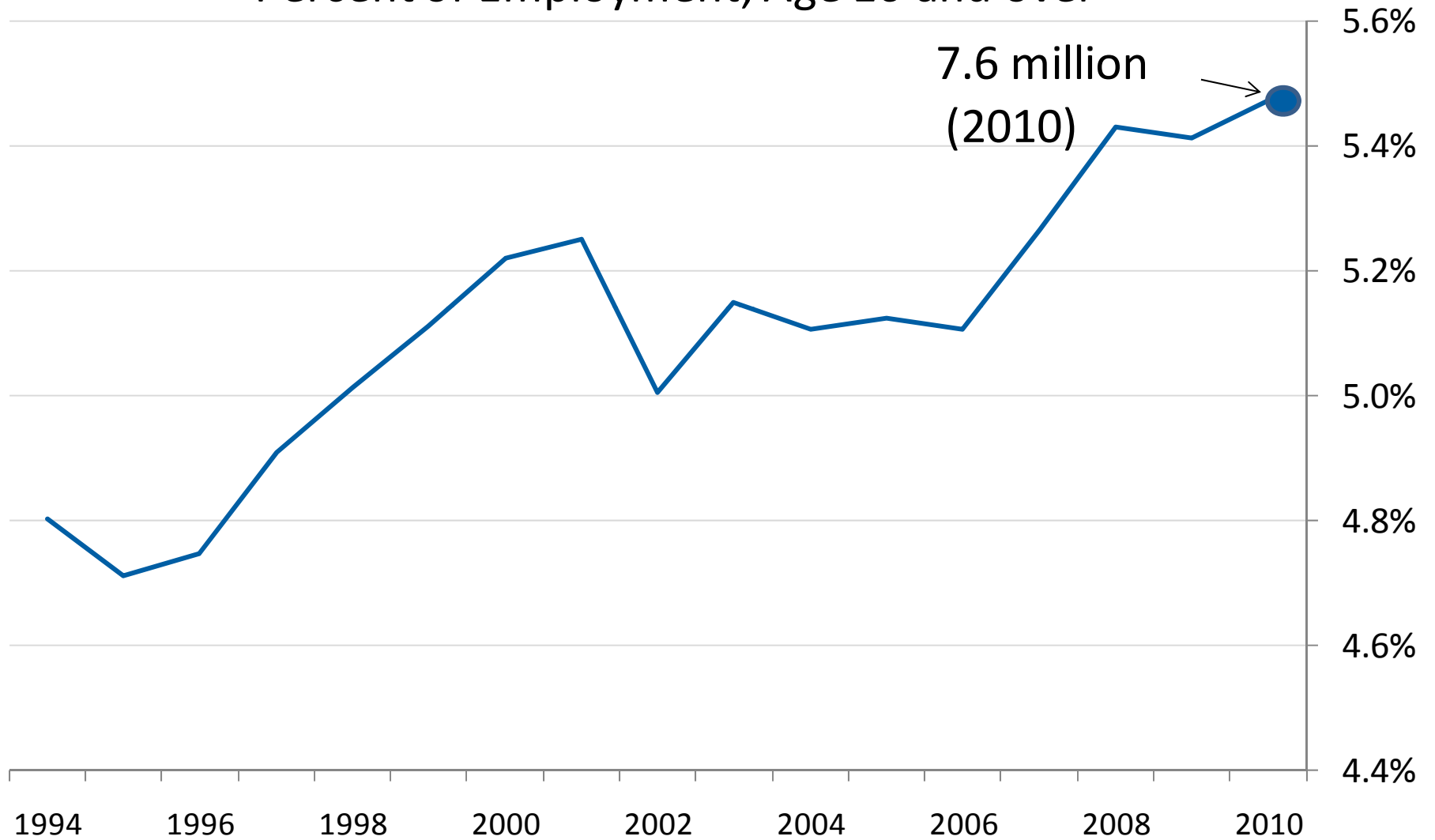
- Chemical engineers
- Biomedical engineers
- Mechanical engineers
- Engineering technicians
- Surveying and mapping technicians

## Managers

- Computer and information systems managers
- Engineering managers
- Natural sciences managers

# Workers in STEM Occupations

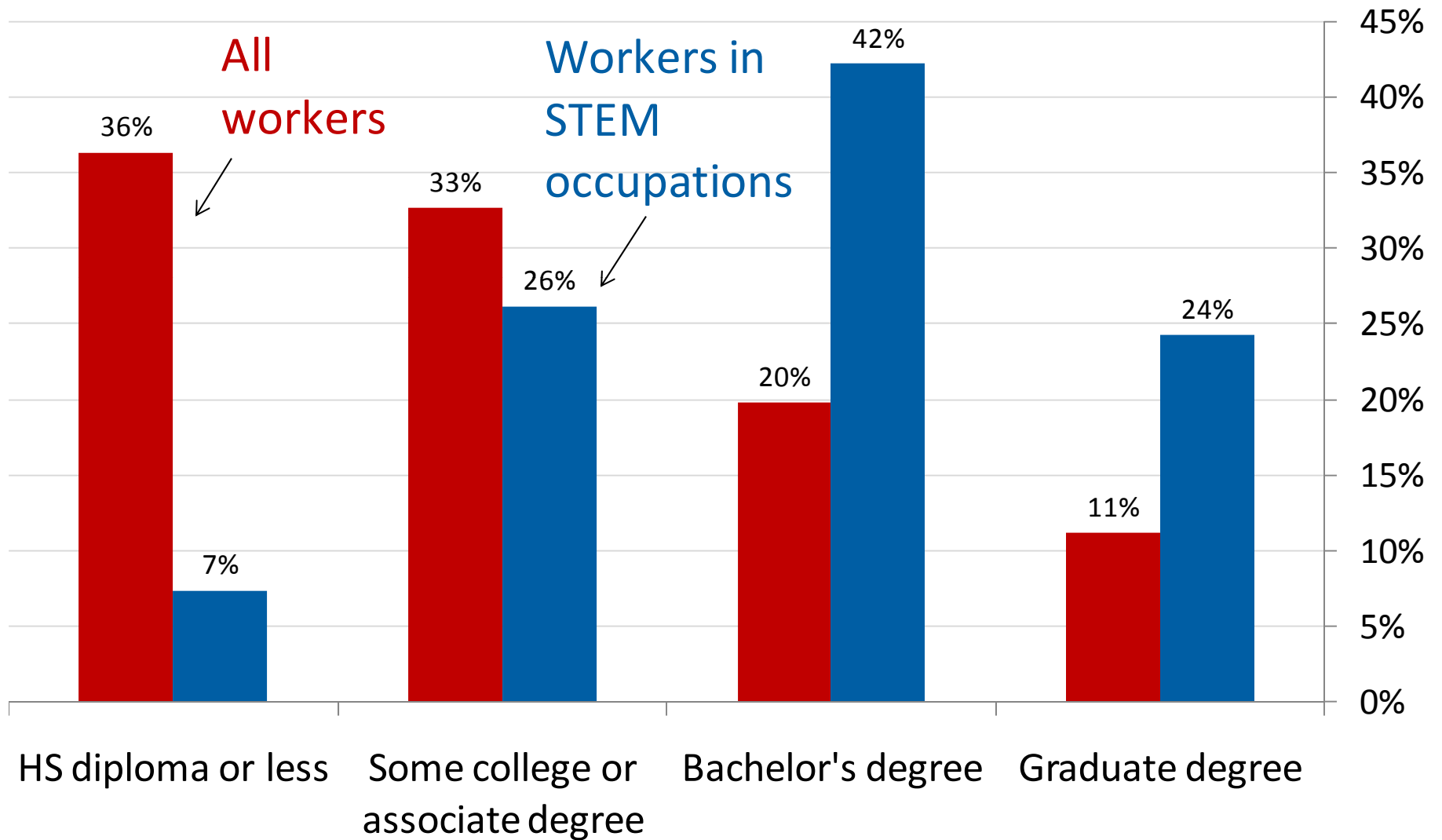
Percent of Employment, Age 16 and over



Source: Current Population Survey public use microdata files, Jan 1994 - Dec 2010.

# Educational Attainment of Workers, 2009

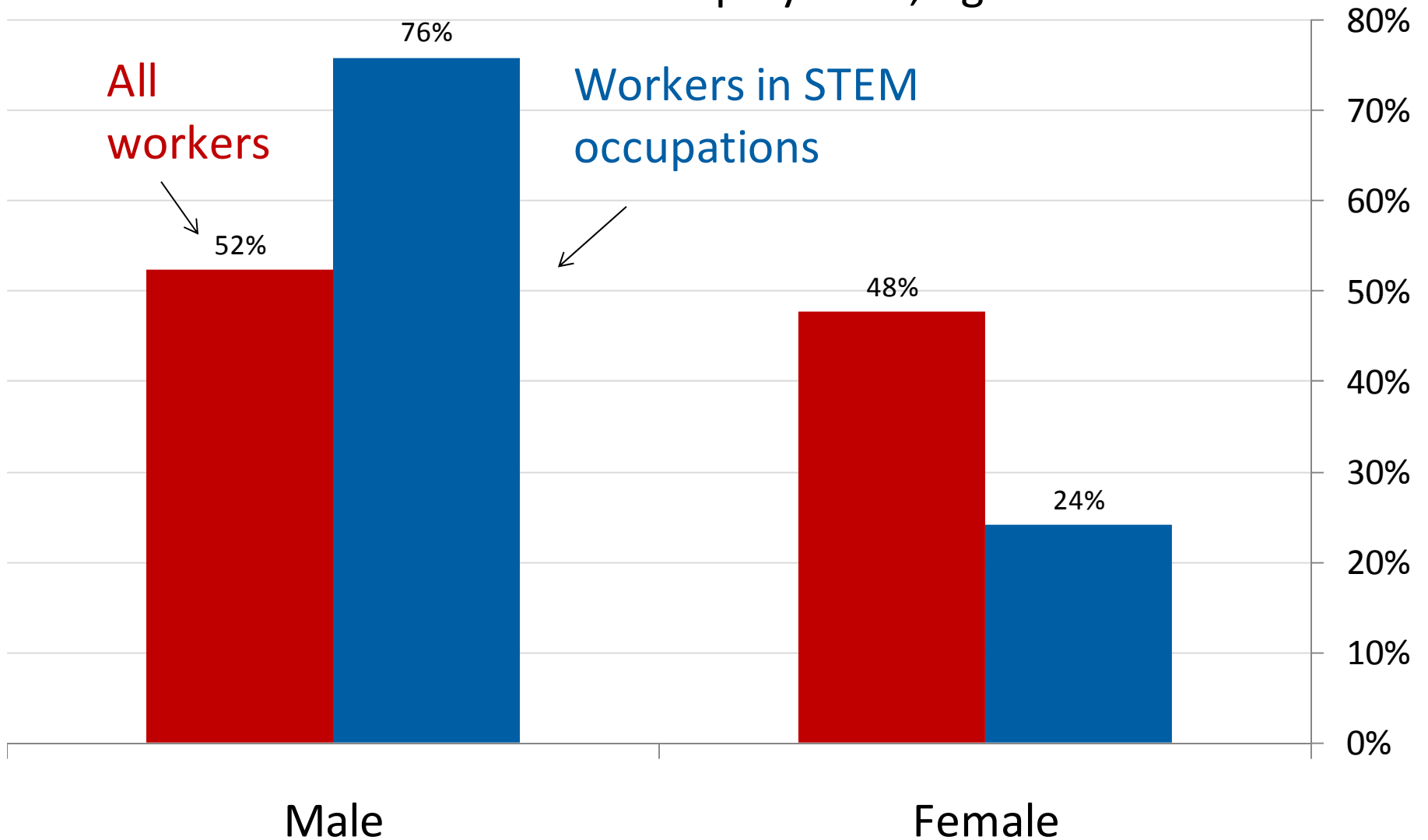
Percent of Total and STEM Employment, Age 16 and over



Source: American Community Survey 2009 public use microdata file

# Male and Female Workers, 2009

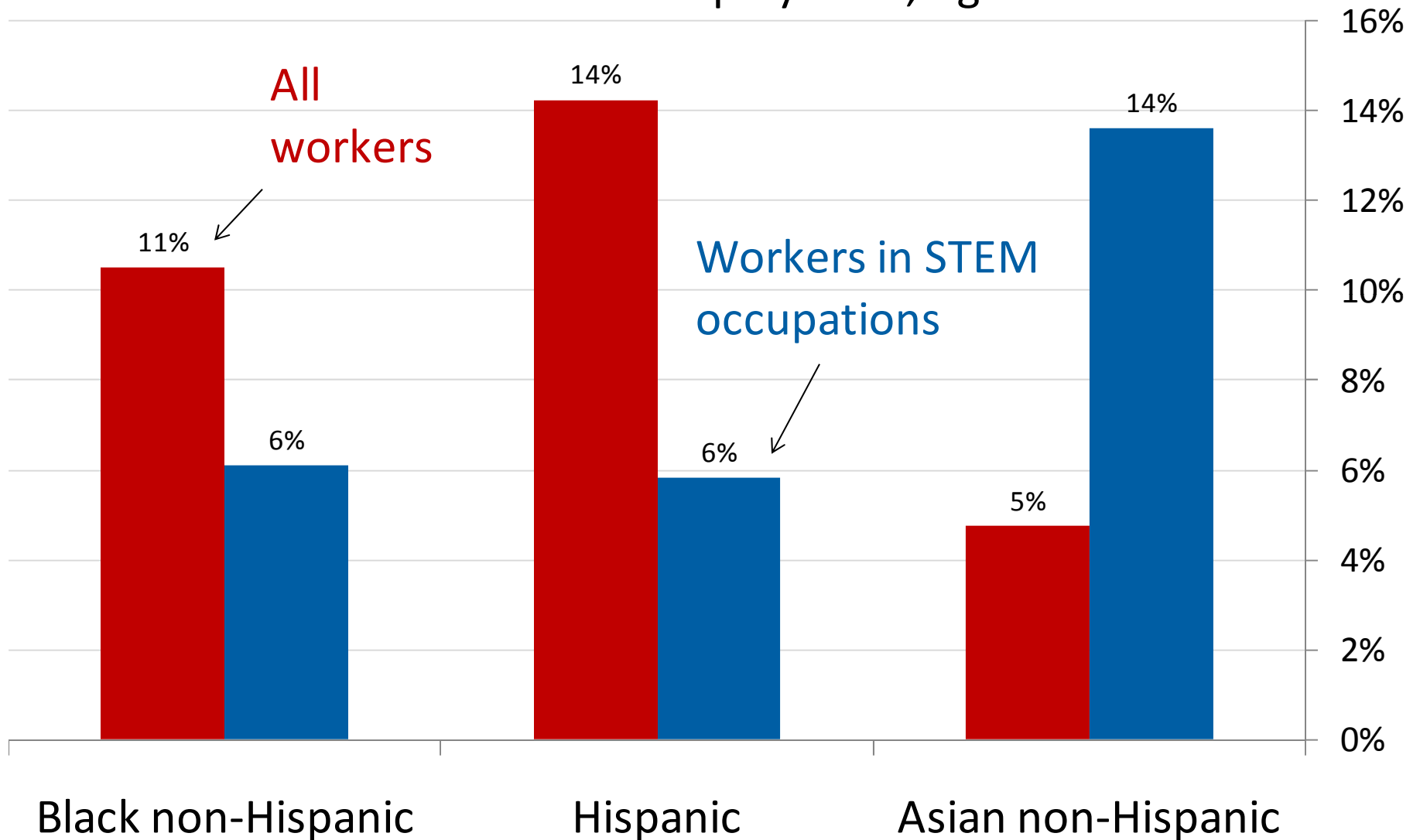
Percent of Total and STEM Employment, Age 16 and over



Source: American Community Survey 2009 public use microdata file

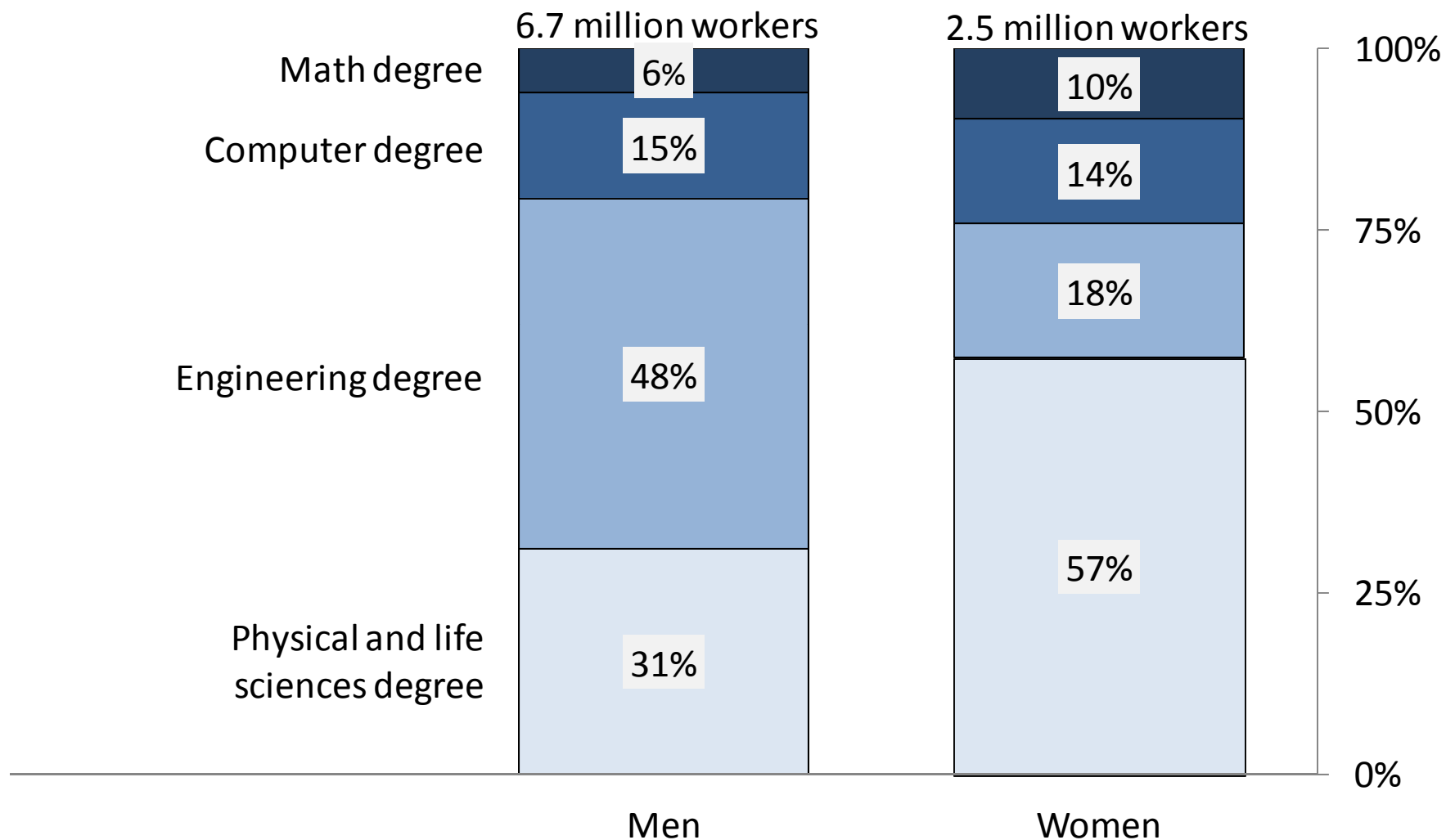
# Black, Hispanic and Asian Workers, 2009

Percent of Total and STEM Employment, Age 16 and over



Source: American Community Survey 2009 public use microdata file

## College-educated Workers with a STEM Degree by Gender and STEM Degree Field, 2009



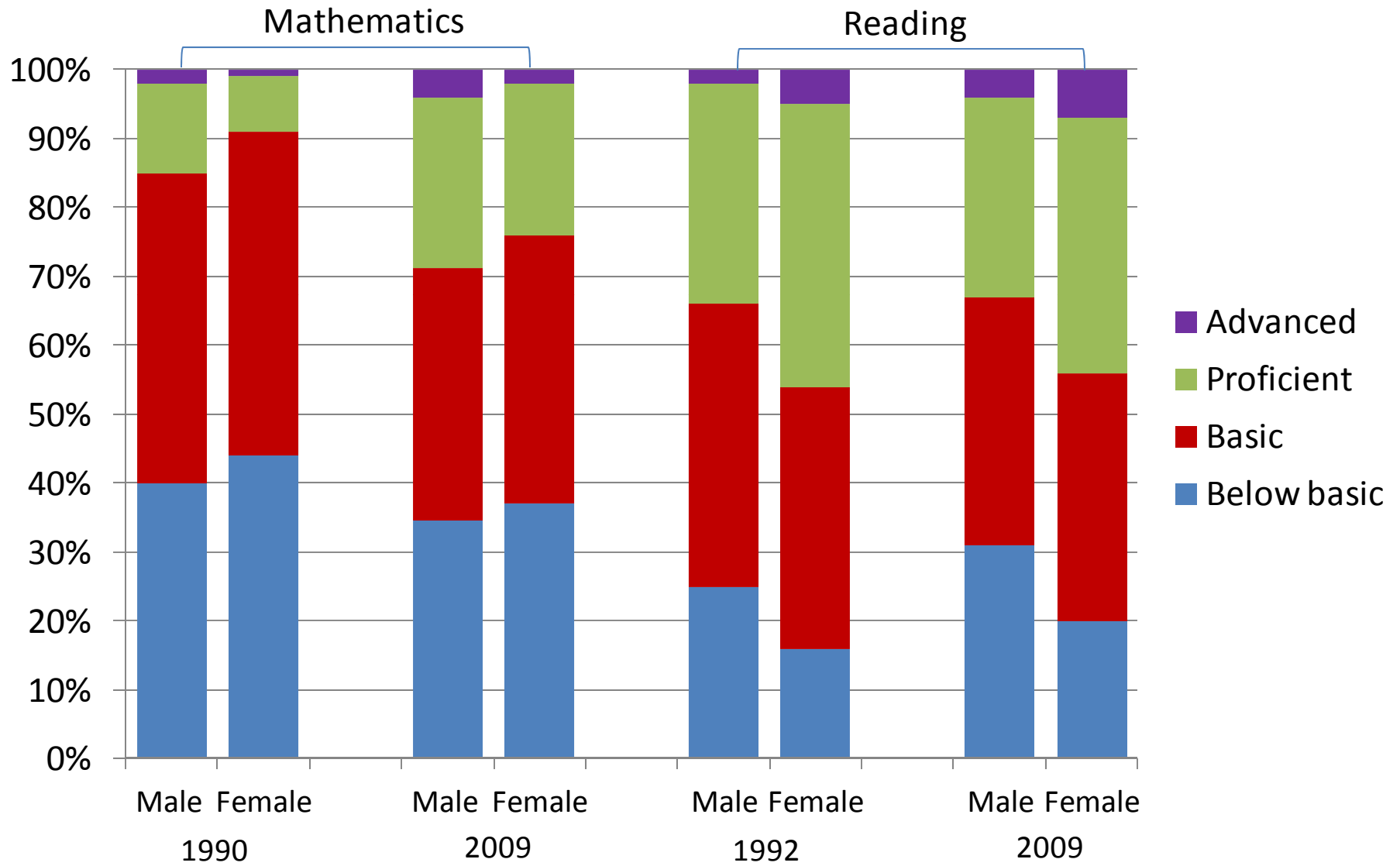
Source: ESA calculations using American Community Survey public-use microdata.

Note: Estimates are for employed persons age 25 and over.

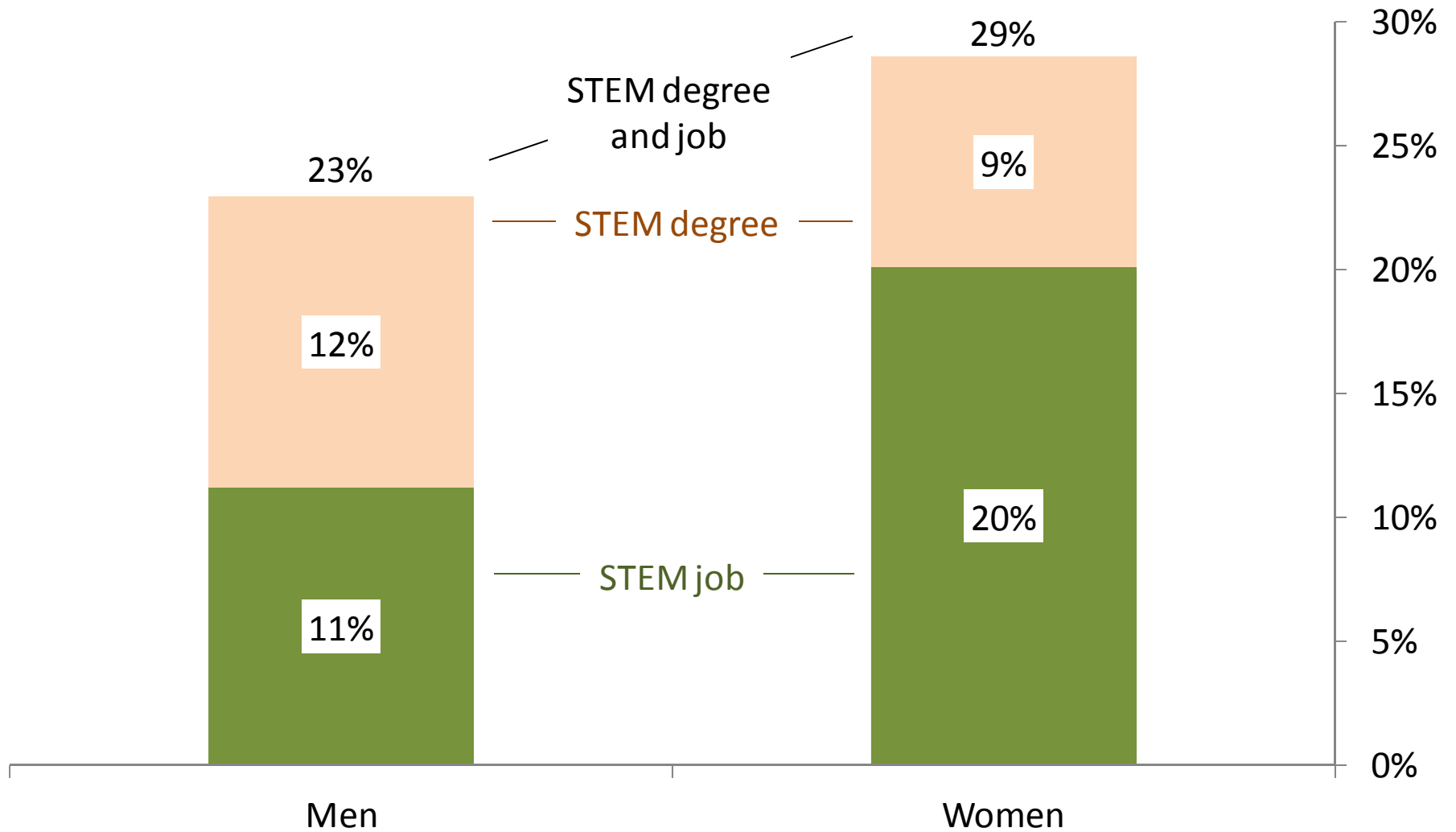


# Mathematics and Reading Proficiency Levels for Grade 12

(National Assessment of Educational Progress, Selected Years, 1990-2009)



## Wage Premium from Having a STEM Job and/or Degree



Source: ESA calculations using 2009 American Community Survey public-use microdata.



# Current Policy Efforts

- President's FY12 budget proposes \$206m in STEM training programs, focused on teacher training.
- *Educate to Innovate* campaign designed to improve U.S. students' participation and performance in STEM fields. Particularly focused on women and underrepresented groups.
- *Race to the Top Fund* (\$4.3b), designed to reward states with high K-12 achievement, gives extra preferences to states with STEM-focused efforts.



# Examples of Current STEM Programs Aimed at Women

- National Oceanographic and Atmospheric Administration (NOAA): *Nancy Foster Scholarship Program*
- The National Institute for Standards and Technology (NIST): *Science: Get Psyched!*,
- The White House Council on Women and Girls and Office of Science and Technology Policy: *Women in STEM Speakers Bureau*



**When we need more highly-trained  
workers in STEM fields...**

**...We cannot afford to have half of  
our population seriously under-  
represented in these occupations.**



For more information:  
*[www.esa.gov/reports](http://www.esa.gov/reports)*

- *STEM: Good Jobs Now and For the Future* (July 2011)
- *Women in STEM: A Gender Gap to Innovation* (August 2011)
- *Race, Hispanic Origin, and National Origin of STEM Workers in the United States* (September 2011)