

MASSACHUSETTS 8TH GRADERS AGAIN PERFORM AMONG WORLD LEADERS IN MATH AND SCIENCE ACHIEVEMENT; SCORE DOUBLE-DIGIT GAINS ON 2011 TIMSS

BOSTON – Tuesday, December 11, 2012 – The Patrick-Murray Administration today announced that Massachusetts students have once again scored among the top performing nations across the world in mathematics and science. The 2011 Trends in International Mathematics and Science Study (TIMSS) show that Massachusetts 8th graders made a 14-point gain in mathematics and an 11-point gain in science achievement since the last time the test was administered in 2007.

Massachusetts students tied for second in science achievement, trailing only students from Singapore. In mathematics, Massachusetts 8th graders tied for fifth, trailing only the four highest performing Asian countries (Korea, Singapore, Chinese Taipei, and Hong Kong SAR). When comparing results back to 1999, Massachusetts 8th graders have made the highest gains of any participating country or benchmarking entity in mathematics (+48, from an average scale score of 513 to 561) and second highest gains in science (+34, from 533 to 567).

“I am tremendously proud of our students for once again performing as global leaders in math and science,” said Governor Deval Patrick. “Our record of leadership in student achievement isn’t by accident – it’s because we have chosen to invest deeply in education, knowing that our students will determine the future success of our economy and our Commonwealth.”

“As Chair of our STEM Advisory Council, I couldn’t be more proud of these results,” said Lieutenant Governor Timothy Murray. “Massachusetts has twice the national average of STEM jobs, and we are hard at work in making sure that our students are prepared to fill those high-demand positions that have kept Massachusetts at the forefront of our global innovation-based economy.

“I am thrilled by today’s news and so appreciative of all of the hard work on the part of educators and students across the Commonwealth that went into these results,” said Education Secretary Paul Reville. “We must continue the work of inspiring more of our students to pursue STEM fields and cultivate a passion for these jobs of tomorrow.”

TIMSS is an international assessment of mathematics and science achievement that has been administered to 4th and 8th grade students every four years since 1995. In 2011, nationally representative samples of students from 63 countries and 14 benchmarking entities, including nine U.S. states, participated in TIMSS. Participating countries and entities could choose to participate in the 4th grade assessment, the 8th grade assessment, or both.

Massachusetts, a benchmarking entity, participated in the 8th grade assessment only in 2011. Massachusetts also participated in TIMSS in 1999 and 2007.

"These are remarkable results, and I am so impressed how Massachusetts 8th grade students and teachers continue to raise their game and build on past successes. These results are testament to the dividends that the Commonwealth's investment in K-12 education is yielding," said Elementary and Secondary Education Commissioner Mitchell Chester. "TIMSS is a renowned international assessment. We will use these results along with other data to identify where gaps in achievement still exist as we strive to ensure that all students are ready for success after high school."

The Patrick-Murray Administration and the Governor's STEM Advisory Council, chaired by Lieutenant Governor Murray, continues to partner with the state's leading research, technology, and education organizations to promote and advance Science, Technology, Engineering, and Math (STEM) initiatives statewide. Massachusetts is a recognized national leader in STEM education, and the Administration has invested heavily in programs and initiatives to develop a highly skilled workforce, foster economic development, and ultimately position the Commonwealth as a leader in the 21st century innovation-based global economy.

On the 2011 TIMSS, Massachusetts 8th grade students had an average scale score of 567 in science, surpassed only by Singapore (590), and commensurate with Chinese Taipei (564), Korea (560), Japan (558), and Minnesota (553). In mathematics, Massachusetts 8th graders had an average scale score of 561, statistically tied with Japan (570), and surpassed only by Korea (613), Singapore (611), Chinese Taipei (609), and Hong Kong SAR (586).

Other TIMSS results for Massachusetts showed:

In science, 24 percent of Massachusetts 8th grade students performed at the highest international benchmark category (Advanced), behind only Singapore (40%). In mathematics, 19 percent of Massachusetts 8th grade students met the Advanced benchmark, lagging behind the top performing Asian countries of Chinese Taipei (49%), Singapore (48%), Korea (47%), Hong Kong SAR (34%), and Japan (27%).

Massachusetts 8th grade male students (average scale score of 570) and female students (564) performed similarly in science, as their score difference in 2011 was not significant. This represents a narrowing of the achievement gap, as male students in Massachusetts outscored female students on the grade 8 TIMSS in science in both 1999 (540 to 527) and 2007 (561 to 551).

In mathematics, the score differences between Massachusetts male and female 8th graders were not significantly different in 1999 (517 to 510), 2007 (550 to 544), or 2011 (563 to 558).

In 2011, TIMSS was administered to 2,075 students from 56 randomly selected Massachusetts public schools. More than 600,000 students worldwide participated.

In mathematics, Massachusetts 8th graders outperformed their counterparts in the other eight participating states (Minnesota, North Carolina, Indiana, Colorado, Connecticut, Florida, California, Alabama) and the U.S. as a whole. In science, Massachusetts 8th graders scored similarly to their counterparts in Minnesota and outperformed their counterparts in the remaining seven participating states and the U.S. as a whole.

For additional information on TIMSS, go to the National Center for Education Statistics' website at <http://nces.ed.gov/timss/>.