

NJ SSI Awards Over \$180,000 in District Grants

This year NJ SSI is distributing \$181,927 to 15 New Jersey school districts to improve mathematics, science, and technology education. It is the eighth consecutive year that NJ SSI has awarded grants to districts across the state.

Approximately 70 schools and districts applied for the 2005-2006 Standards Implementation Grants in a highly competitive application process. Congratulations to the selected schools and districts: **Burlington Township, Byram Intermediate, Clayton, Haddon Heights Consortia, Haddonfield, Jefferson Township, Medford Township, Montclair, Pemberton Township, Rutherford, Saint Mary School, Salem City, Stafford Township, Ventnor, and Winfield.**

They have received grants ranging from \$5,000 to \$20,000, which will support New Jersey's Core Curriculum Content Standards through the implementation of standards based curriculum programs in mathematics, science, and technology education.

DISTRICT RFP TECHNICAL ASSISTANCE SESSIONS FOR 2006-2007 GRANTS

Schools and districts have the opportunity to apply for Standards Implementation Grants for 2006 - 2007. For further information and technical assistance, please contact the Regional Center in your area. The deadline for submission is February 6, 2006. A copy of the solicitation is available on the NJ SSI website: <http://njssi.rutgers.edu> under "News and Events."



Pemberton Township students & Domino Math. This activity reinforces numeration, greater than/less than, and addition facts.

NJ SSI REGIONAL CENTERS

ESSEX, MORRIS, PASSAIC, SUSSEX AND WARREN COUNTIES

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Happy New Year! NJ SSI looks forward to continuing to work with its Regional Centers, school districts, and statewide partners in 2006. *Solutions* highlights district success stories and provides our partners with news and information. In this issue you'll find:

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Student Achievement in Pemberton Township

After several years of curriculum consultation with NJ SSI, Pemberton Township will begin implementing a district-wide effort to improve student achievement through new standards-based curriculum in mathematics at the elementary level.

“During a 2002 Urban Summit, I attended an NJ SSI presentation and learned about the correlation between increased student test scores and the implementation of standards- and inquiry-based curricula,” said Ronald Beebe, principal of Emmons Elementary School in Pemberton Township.

Intrigued by this link, Mr. Beebe presented NJ SSI’s findings to Emmons Elementary’s management committee. In 2002-03, 78% of Emmons fourth grade students were advanced proficient in mathematics on the NJASK. Mr. Beebe felt they could do better and persuaded his teachers to attend NJ SSI’s Partnership Program at the Regional Center at The College of New Jersey (TCNJ). During 12 days of intensive professional training, the Emmons team produced a five-year strategic plan that focused on mathematics. Most importantly, the Partnership Program challenged these teachers to think beyond ordinary instructional methodologies. As a result, students’ mathematics NJASK scores increased more than 10 percentage points in 2005, to 89.2%.

Iliana Okum, Pemberton Township’s Assistant Director of Curriculum and Instruction, was impressed with Emmons’ increased test scores, just one year after completing the NJ SSI Partnership Program. She met with Mr. Beebe to discuss Emmons’ relationship with NJ SSI. Their meeting inspired a district-wide review of student achievement data and curriculum alignment, which revealed that low test scores were attributed to dated, traditional mathematics curricula and textbooks still being used for instruction. Through continuing conversations with teachers and principals, professional

development focused on improving student achievement and the district realized it had to make substantial changes in mathematics.

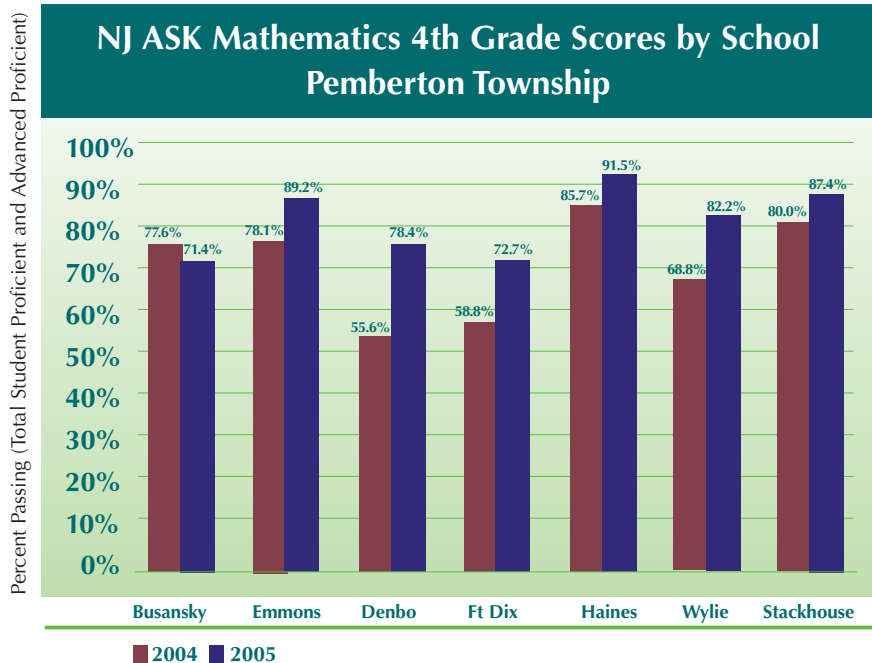
With support from all district schools, Pemberton again approached the NJ SSI Regional Center at TCNJ for further consultation. The results were an expanded partnership with the district, a district-wide five-year strategic plan, and introductory workshops exploring a host of standards-based programs, concepts and algorithms.

“We quickly learned that curriculum infused with constructivist theory engages teachers and students in meaningful activities. Moreover, they help optimize students’ capacity for comprehension and retention,” stated Ms. Okum.

As part of the NJ SSI Partnership Program’s “Next Steps” phase, Pemberton Township teachers decided to implement Everyday Math by way of consensus vote. This math curriculum is interactive and designed to engage teachers and students in learning activities that explore numbers and concepts in modified and relevant ways. This year Pemberton piloted Everyday Math in its first grade classrooms district-wide. Next year, Pemberton will launch the new mathematics curriculum in K and 2-6th grades, according to Mr. Charles Highsmith, Assistant Superintendent for Curriculum and Instruction. Also, at the secondary level, the district is planning to implement Connected Mathematics at the 7th and 8th grades and the Integrated Mathematics Program (IMP) in selected classes at the high school level.

To assist with ongoing professional training and development throughout the year, Pemberton received a \$20,000 Standards Implementation grant from NJ SSI. At this critical juncture, such funding is important as Pemberton continues to move forward with “Next Steps.” Funds also support efforts to orient parents about the changes through meetings and workshops.

To effectively teach new mathematics methodology, Pemberton will intensify its professional development for teachers through the NJ SSI Regional Center professional training program in the 2006-2007 academic school year. Pemberton teachers will have the opportunity to work and learn together and to build on what is working thus far. “We are certainly looking to NJ SSI to help provide much needed support,” added Ms. Okum.



NJ SSI Partnership Program Profile: Hackettstown

Located in Hackettstown, New Jersey, Hatchery Hill Elementary School is home to over 260 students, ranging from grades pre-K to four. Sandra Machacek, the school's principal and the former Director of Curriculum, credits the NJ SSI Partnership Program with providing key training to reinvigorate her school and district's mathematics and science curricula.

In August 2001, Machacek and seven teachers and supervisors from Hackettstown attended the Partnership Program at the NJ SSI Regional Center at the County College of Morris. Trish Rokosz, the Center Director and Dan Jazwinski helped Machacek's team develop a data-driven strategic plan for increasing student achievement in mathematics and science and provided 12 days of professional development.

"The NJ SSI Partnership Program was the best integrated professional development workshop for teachers I've ever attended," said Ms. Machacek. "The program gave intense training and offered long-range, systematic solutions to the curriculum issues we faced in our district."

Eager to turn their professional training into measurable results, the Partnership Program participants from Hackettstown returned to their district and adopted a number of new standards-based science modules and Math Trailblazers, a program based on the investigation of everyday situations as the ideal method for learning mathematics.

"Teachers find Math Trailblazers to be a great, 'hands-on' program for our students to learn how to problem-solve," added Machacek.

Since adopting the new curricula, NJASK mathematics and science test scores reflect strong signs of student achievement. In addition, 2005 was the first year New Jersey fourth-grade students were required to take the NJASK in science. Hackettstown students' scores were extremely impressive: 96.4% of total students were proficient or advanced proficient (see chart below).

Ms. Machacek credits the Partnership Program and the vision of NJ SSI with providing key training for the success she has witnessed in her district. In fact, the Hackettstown team created their own mission statement, based on their NJ SSI participation: To create a community of engaged and resourceful leaders who integrate mathematics, science and technology learning, with the goal of increased student achievement.

That's a message NJ SSI hopes to deliver to teachers, supervisors and districts all across New Jersey.

NEWS FROM THE NJ DOE

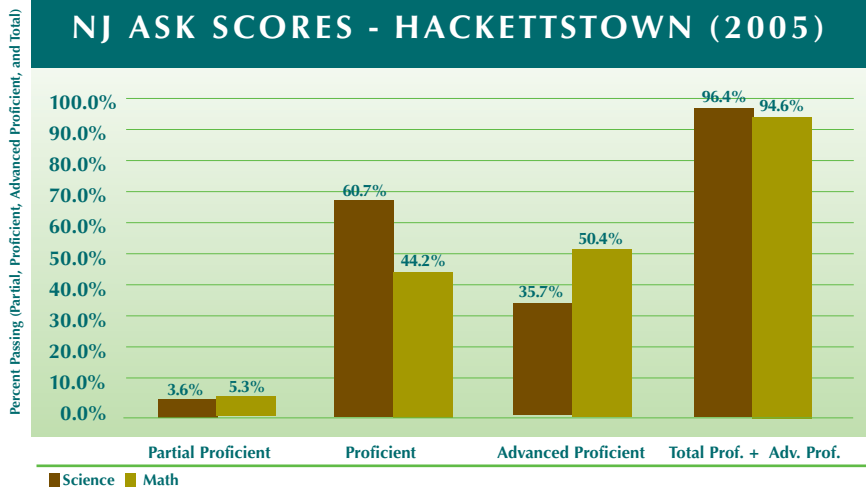
In November 2005, the New Jersey Department of Education released its "Horizontal Design of the Science Standards." This document is a reformatted version of the New Jersey Core Curriculum Content Standards for Science, as revised and adopted by the New Jersey State Board of Education in July 2004. New Jersey's Science Standards encourage the teaching of science as a hands-on experience in the classroom, in the laboratory, or outdoors.

The "Horizontal Design" reflects the needs of New Jersey students and teachers and was developed in response to requests from schools and school district personnel for a version that would make it easier to track the learning of specific science content across all grade levels. Specifically, the grade clustering system in the current version reflects developmental appropriateness of the content and skills to provide guidance for appropriate implementation. The new guidelines define what all students should understand and be able to apply as their scientific literacy increases.

Answers to frequently asked questions concerning the revised standards are available on the Department's website at <http://www.state.nj.us/education/>. The Horizontal Design can be viewed and downloaded at <http://www.nj.gov/njded/aps/cccs/science/framework.htm>. Standards for other content areas may be found at <http://www.njep.org/standards/index.html>.

For further information, please contact Michael Heinz, New Jersey Department of Education Science Coordinator, at michael.heinz@doe.state.nj.us.

NJ ASK SCORES - HACKETTSTOWN (2005)



CALENDAR OF EVENTS

JANUARY

1/17, 2/7

Patterns and Algebra & Geometry (3-4)
CMSCE, Rutgers University

1/18

Connected Math and the GEPA
Rutgers University, Busch Campus Center

1/18

Family ASTRO (3-12)
Raritan Valley Community College

1/18, 2/6

**Working With Data & Number Sense:
Whole Numbers (3-4)**
CMSCE, Rutgers University

1/24

Premier Science (6-8)
County College of Morris, Student Center

1/26

**Association of Mathematics Teachers of
NJ Regional Conference
Preparing for State Assessments in
Grades 5, 6, 7**
Jamesburg Holiday Inn, NJ Turnpike, exit
8A

**Preparing Students for Technology
Standard Testing**

The College of New Jersey

FEBRUARY

2/1

**Measurement & Number Sense:
Fractions (3-4)**

CMSCE, Rutgers University

2/2

**Probability and Discrete Math
and Problem Solving (3-4)**

CMSCE, Rutgers University

2/3

**CPO Science Foundation of
Physical Science (7-12)**

Rowan University

2/7

**Introduction to Hands-On Astronomy
(5-12)**

Raritan Valley Community College

2/15

**Strategies to Prepare Special Education
Students for The HSPA (9-12)**

CMSCE, Rutgers University

2/21

Our Solar Connection (5-12)
Raritan Valley Community College

2/23

**Foundations of Physical Science with
Earth & Space Science (Middle School)**

Rutgers University, Busch Campus
Student Center

MARCH

3/1

Kinesthetic Astronomy (5-12)
Raritan Valley Community College

3/17

**Twentieth Annual "Good Ideas in
Teaching Precalculus Conference"**

CMSCE, Rutgers University, Busch
Campus

**For additional information
about these events and other
professional development
opportunities, please visit the
Events section of the NJ SSI
website at <http://njssi.rutgers.edu>.**



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