



Results Report: ASSET Students Significantly Outperform Peers

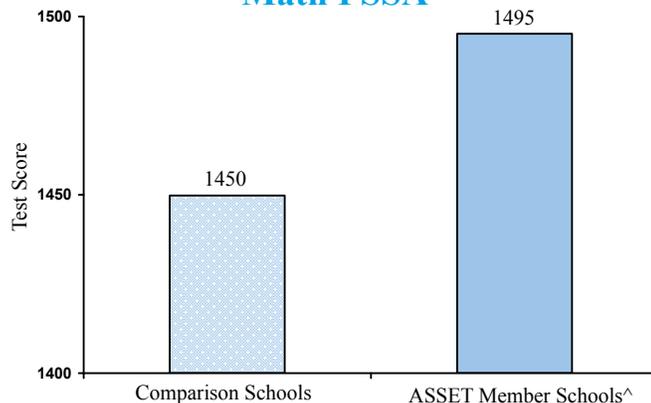
ASSET 4th-Graders Score Significantly Higher in Science, Math and Reading

For 15 years ASSET has been quietly transforming the way teachers teach and students learn. As a nonprofit education improvement organization, ASSET supports school districts in implementing a standards-based science education program through teacher professional development aligned with hands-on curriculum materials for grades K-8. ASSET also partners with the Pennsylvania Department of Education to design and manage the statewide *Science: It's Elementary* program.

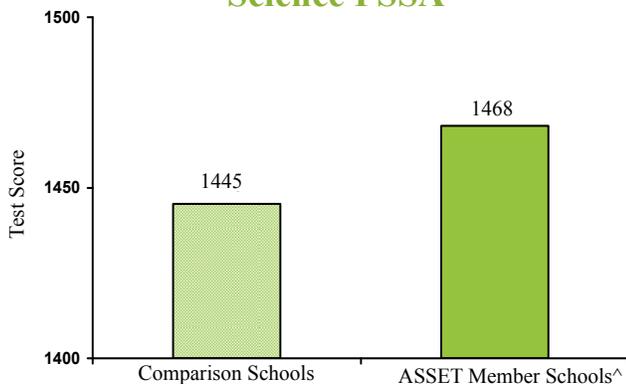
Horizon Research, Inc., an independent research firm specializing in work related to science and mathematics education, has evaluated the *Science: It's Elementary* program during the past three years. ASSET also contracted Horizon Research to examine the impact of ASSET membership on student achievement as measured by the Pennsylvania System of School Assessment (PSSA).

The study* examined data for 4th and 8th** grade students from both the 2007-08 and 2008-09 PSSAs. At 4th grade, **students in ASSET member schools scored significantly higher than students in demographically similar comparison schools** on the science and nature of science sub-scale, mathematics and reading assessments.

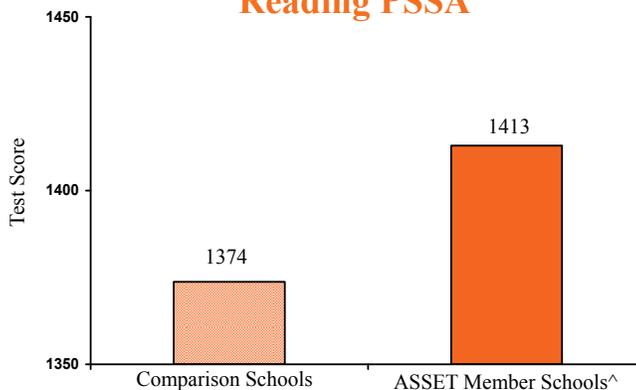
Math PSSA



Science PSSA



Reading PSSA



[^] Controlling for student and school demographic characteristics, scores of students in ASSET member schools are significantly different than students in comparison schools, $p < 0.05$ (HLM).

* Examining the Impact of ASSET Membership on Student Achievement: Analysis of PSSA Grades 4 and 8 Data, December 2009, Horizon Research, Inc.

**Due to the small sampling size of ASSET member schools containing 8th grade, the probability of detecting a difference is small. Contact ASSET Inc. for full reports.

Investing in Teacher Professional Development

Research shows that teacher quality is the single most important factor in improving student achievement.⁺

305,000 ASSET Professional Development hours accrued by teachers since 1993

41,000 Total participants engaging in ASSET Professional Development since 1993

⁺Vandevoort, L. G., Amrein-Beardsley, A., & Berliner, D. C. (2004). National board certified teachers and their students' achievement. *Education Policy Analysis Archives*, 12(46).

Return on Investment: Student Achievement (2008-09)

- 64% of ASSET districts achieved total student proficiency of 90% or more in science.
- 30% of low socio-economic schools* within ASSET districts achieved total student proficiency of 90% or more in science.
- 11% of schools within ASSET districts attained 100% student proficiency in science.

*40% or more students receive free/reduced lunch

ASSET Inc.

(Achieving Student Success through Excellence in Teaching)

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Science: It's Elementary

Year Three Results Report

Launched in 2006, *Science: It's Elementary* (SIE) is a statewide effort to improve elementary science education in Pennsylvania. Currently, the SIE program provides hands-on, inquiry-based instructional materials supported by rigorous professional development to 2,800 teachers, enabling 67,000 students to learn science by doing science.

Horizon Research, Inc., an independent research firm specializing in work related to science and mathematics education, has evaluated the SIE program each year since its inception. Evaluation results* show that, in its third year (2008-09), SIE continues to have a positive effect on students, teachers and science education programs in schools across the Commonwealth.

Improving Student Achievement

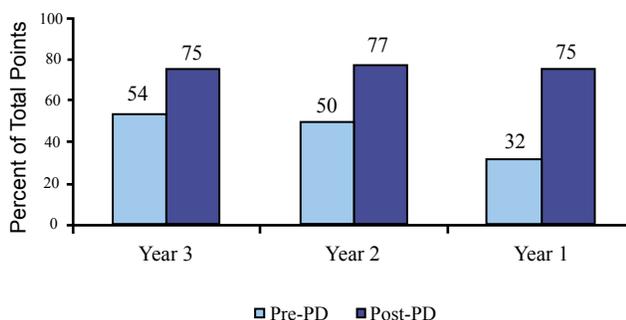
- **Students scored significantly higher on post-tests than pre-tests.**
- Students achieved **greater learning gains** in classes where teachers based **more of their instruction on SIE-supported modules.**
- Students achieved **greater learning gains** when their teacher participated in **more SIE-provided professional development.**
- A significant, positive relationship exists between scores on HRI's assessments and the PSSA assessment, indicating that the **HRI assessment is a good predictor of PSSA achievement.****



Impacting Teachers and Teaching

- Teachers participating in all three years of the program indicate that their **perceptions of their science content knowledge and their readiness to teach hands-on, inquiry-based science increased significantly** after SIE professional development.
- First-year SIE teachers participating in 3-day module courses show the **largest gains** (43 points) from pre- to post-professional development sessions.

Teacher Perceptions of Their Science Content Knowledge



Advancing School Science Education Programs

District supervisors, principals and teachers representing schools participating in all three years of SIE indicated that:

- **Science is a higher priority** in their schools as a result of participating in SIE.
- **Instructional time devoted to science has increased.**
- **Teachers incorporate a more hands-on approach** to teaching science since their schools joined the SIE program.

**Science: It's Elementary Year 3 Evaluation Report, July 2009, Horizon Research, Inc.*

***Examining the Impact of Science: It's Elementary on Student Achievement, Analysis of PSSA Grade 4 Data, December 2009, Horizon Research, Inc.*