



# *Science: It's Elementary*

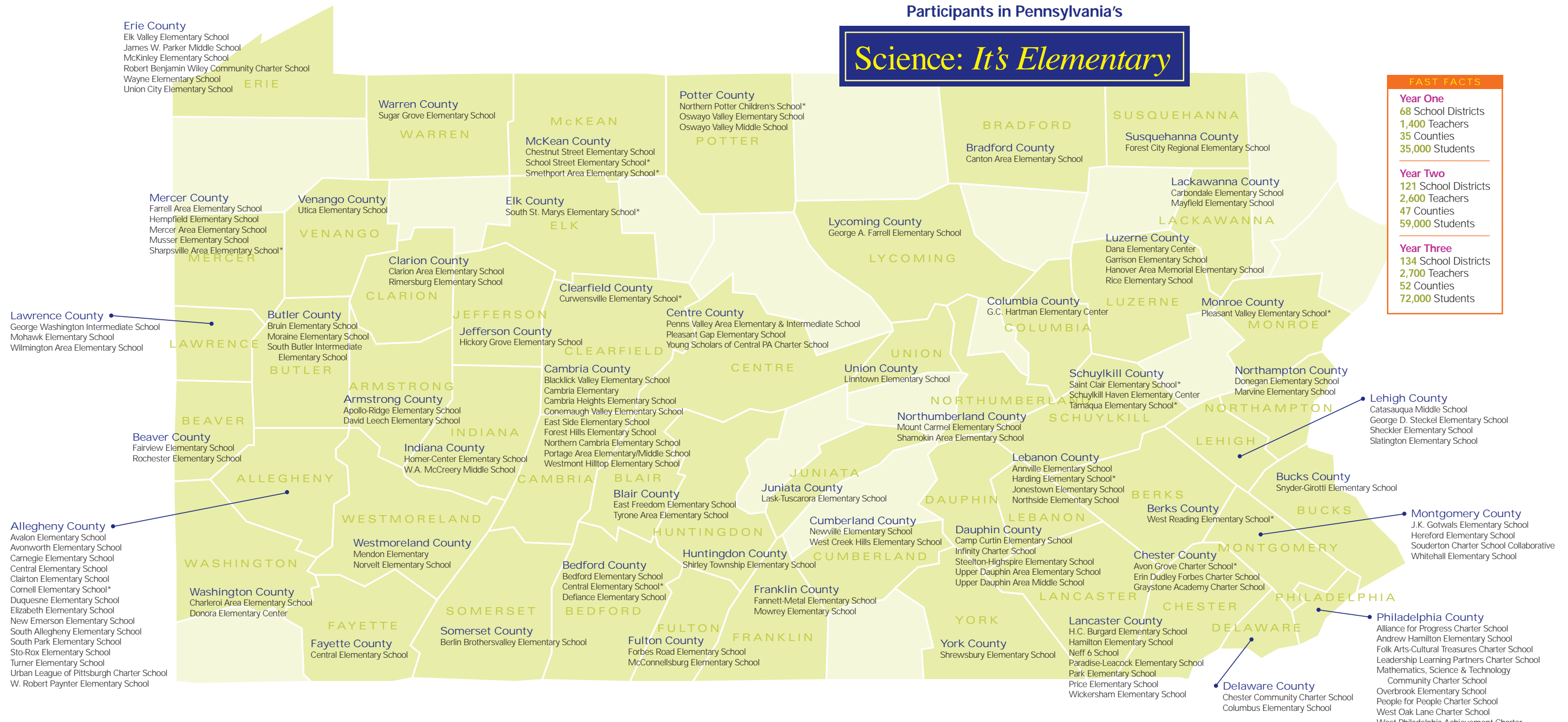
*2008-2009*



*Leading the Charge for Improved  
Science Teaching and Learning*

# Science: *It's Elementary*

FAST FACTS	
<b>Year One</b>	68 School Districts 1,400 Teachers 35 Counties 35,000 Students
<b>Year Two</b>	121 School Districts 2,600 Teachers 47 Counties 59,000 Students
<b>Year Three</b>	134 School Districts 2,700 Teachers 52 Counties 72,000 Students



Pennsylvania Governor Edward G. Rendell with President Barack Obama

## Science and Math Education: *A National Priority*

In Pennsylvania, a **groundbreaking initiative** is transforming the way science is taught in elementary schools.

The critical need to improve science and math education is making headlines across the country. President Barack Obama's plan for "Lifetime Success through Education" urges that science and math education become a national priority. To achieve this goal, President Obama pledges to work with governors "to create flexible and workable systems for states to ensure that all children have access to strong science curriculum at all grade levels."

His plan singles out Pennsylvania's *Science: It's Elementary* program as an example of a state taking steps to encourage inquiry-based science education statewide. ASSET Inc. — in partnership with the Pennsylvania Department of Education — is responsible for the design, coordination and implementation of this exciting and innovative program.

ASSET has also earned acclaim from the National Science Resources Center, a joint project of the National Academies and the Smithsonian Institution, as "a model for the nation."

A report released in December 2008 by Trends in International Mathematics and Science Study (TIMSS) shows that the United States still lags behind many other industrialized countries in preparing a workforce that will excel in a science- and technology-driven economy.

Research findings have repeatedly confirmed that a significant factor in raising academic achievement is the improvement of instructional capacity in the classroom. Believing that teachers are both the targets and agents of change, *SIE* focuses on equipping teachers — with research-based, hands-on materials aligned with ongoing, rigorous professional development — to continuously improve classroom teaching and learning.

# “Every dollar invested in today’s children is a down payment on a brighter future for the Commonwealth.”

— Governor Edward G. Rendell

Launched in 2006-07, *Science: It’s Elementary* is a landmark statewide initiative spearheaded by Pennsylvania Governor Edward G. Rendell and funded by the state legislature. ASSET Inc. was chosen to partner with the Pennsylvania Department of Education (PDE) based on its more than decade-long record of improving student learning in school districts throughout southwestern Pennsylvania.

PDE selects all *SIE* grant recipients, giving priority to schools with more than 40 percent of their students performing below proficiency levels in both reading and math on standardized state tests.

To date, the state legislature has invested \$38 million in *SIE*, bringing hands-on, inquiry-based science to 134 school districts, 2,700 teachers and nearly 72,000 students.

Participating teachers engage in research- and standards-based training on science content and teaching methodology that includes:

- Three days of rigorous professional development
- Hands-on, inquiry-based instructional materials and science notebooks for use in their classrooms

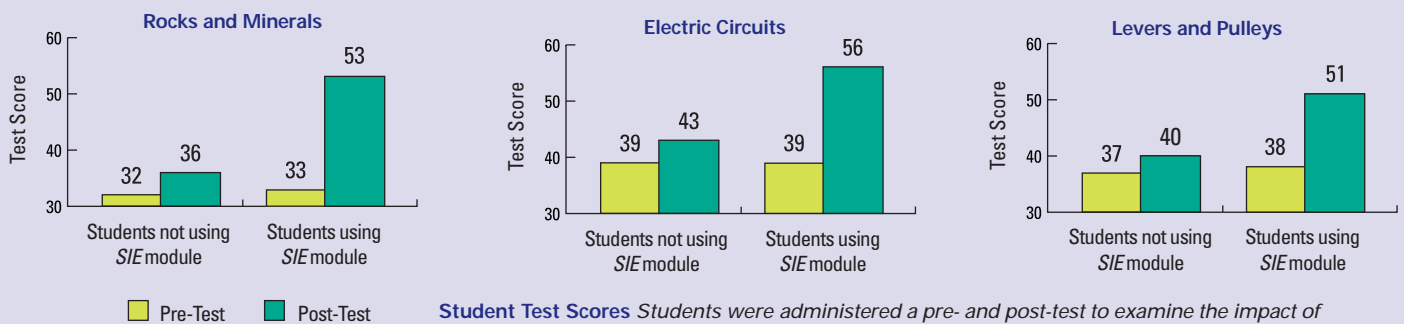
*SIE* also assists schools in developing support for implementing and sustaining standards-based science education programs through:

- Strategic planning support
- Turn-key materials for holding a *Showcase of Student Learning* to involve community and administration
- Development of lead teachers to begin building a network of teacher trainers

Horizon Research, Inc. (HRI), a national education evaluation firm based in Chapel Hill, N.C., has observed and evaluated *SIE*’s impact on science education in Pennsylvania since the program’s inception. Results include:

- Students receiving instruction via *SIE* hands-on science units from teachers who participated in *SIE* professional development scored significantly higher on 16 of 19 assessment scales than students not receiving instruction via those units.\*
- Student end-of-unit test scores were also significantly higher the second time teachers taught a unit.\*
- There was a significant positive relationship between the amount of instructional time spent on the science unit and student post-test scores on selected units.\*
- Teachers participating in additional two-day science enrichment courses scored higher on post-tests on units covered.\*
- Students scored 5% higher on end-of-unit tests if their teacher participated in all three days of professional development, as opposed to only one or two days.\*\*

\* *Science: It’s Elementary Year Two Evaluation Report, July 2008 (Updated October 2008), Horizon Research, Inc.*  
 \*\* *Examining the Impact of Science: It’s Elementary on Student Achievement, August 2007, Horizon Research, Inc.*



Achieving Student Success through Excellence in Teaching

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