

About *Just for the Kids—New York*

Since its inception in 2004, one goal of Just for the Kids-NY has been to help schools learn from other schools that are performing well. So far the project has identified best practices in elementary, middle, and high schools and is currently testing tools to help schools put the findings to use. With the most recent study, it has now identified best practices in middle school science, in which researchers examined schoolwide factors as well as classroom practice in science. Results of both the current and prior studies are available on line at knowyourschoolsny.org and www.albany.edu/aire/kids and include reports, case studies, best practice frameworks, sample evidence from higher-performing schools, articles, and presentations. Some are also available in print.

In 2009 the project launched a new website, Know Your Schools~for NY Kids (knowyourschoolsny.org), that makes it easy to learn how any school in the state is doing on state assessments and to compare its performance to similar schools.

For more information visit the websites or call 518-442-5171.

What Works in Middle School Science:
Preparing Adolescents to Become the Next Generation of Scientists

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To download a copy of this summary or the full report, or to order print copies, go to knowyourschoolsny.org.

What
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WHAT WORKS IN MIDDLE SCHOOL SCIENCE

“Keep it fun!” say educators when asked how to inspire higher performance in science among adolescents. What distinguishes schools that consistently achieve better than average results, however, are the details of how they also keep it focused on what matters most: both engaging kids in science *and* preparing them for the more complex and abstract science of high school. Although keeping science fun for 11-15 year olds means different things for different schools, our study found that there are some broad-stroke best practices that apply to any school.

RESEARCH METHOD

Continuing a series of studies of higher-performing schools in New York State, researchers recently studied a representative sample of middle schools based on their students’ performance on the Intermediate-Level (Grade 8) Science Examination in 2006-2008. They interviewed science, special education, and English as a Second Language teachers, as well as administrators, and observed a sample of science classes in those schools. Their goal was to learn what marks the difference between schools whose students consistently perform above average in science and those that get average results. Percentages of students qualifying for free or reduced-price lunch exceeded the state average in about half of these schools.

The consistently higher-performing schools included are:

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| Bolivar-Richburg Middle School/High School, Bolivar | Greene Middle School, Greene | Johnson City Middle School, Johnson City | Thomas C. Armstrong Middle School, Wayne |
| Geneseo Middle School, Geneseo | Jefferson Middle School, Jamestown | Oliver W. Winch Middle School, South Glens Falls | |

KEY FINDINGS

Higher performance in middle school science is influenced by five factors:



1 Fairness and Fun

Educators have established a climate in which teachers and administrators ensure that every student is prepared to succeed in high school science and has had opportunities to experience science as both fun and relevant to their lives.

2 Focus

Teachers and administrators use a variety of data and frequently collaborate with each other to identify needs for professional development as well as changes to curriculum and instruction across grade levels.

3 Foundations

To ensure that students develop scientific knowledge and skills, educators continually review and revise the curriculum and use hands-on and inquiry-based instructional practices designed to work with different learning styles.

4 Fluency

Educators in higher-performing schools work to integrate science with other content areas, building both scientific literacy and literacy skills more generally.

5 Fit

Higher-performing schools hire teachers who are qualified to teach science, want to teach middle-level students, and fit well with the culture of the school in general and science department, in particular.



Success in middle school science