

Science Literacy Project and WeatherBug® Schools Improve Achievement Scores and Classroom Atmosphere in New York City Schools



For the past three years, schools that participated in the Science Literacy Project provided by WeatherBug® Schools and USA TODAY have excelled in test scores and have fostered a student environment of teamwork and friendly competition.

The Situation:

In pursuit of meeting the No Child Left Behind Act, over 35 New York City schools joined an innovative project to raise student achievement scores. The project brought students and teachers from all grade levels together from across the city, including Brooklyn, Staten Island and the Bronx, to boost morale, interpersonal skills and achievement scores. The program was to be fun and engaging and still follow state and city school district-approved curricula.

The Solution:

The solution was a second-semester educational program that incorporates a virtual road trip across the US using real-world events. Within the past three school years, over 1,000 students from fourth to 12th grade and at all academic performance levels have participated in the Science Literacy Project.

Each project team collects weather-related science articles from USA TODAY. The students locate the specific state for the story on a US map and determine the city location using a road atlas. Then, using WeatherBug Achieve resources, they research the weather patterns and other weather-related information for the area of the news story.

Using WeatherBug Achieve, students investigate math, science, geography and technology through real-life weather conditions and lesson plans that align with national and state education standards. With a proprietary network of over 8,000 WeatherBug® Tracking Stations installed at schools across the country, project members use the precision data collected to determine how weather conditions played a role in their news articles.

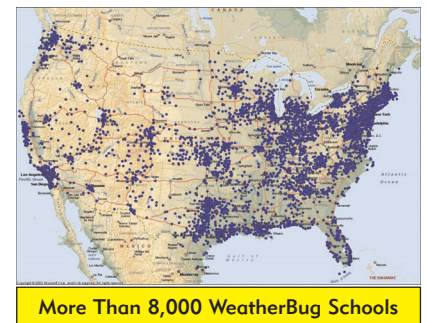
At the end of each school year, the students' projects are judged at a Share Fair. At the fair, judges award the best project, two runners-up and the best school submission as determined by creativity and adherence to project requirements.

In the second and third years, student achievement was measured with a pre-test/post-test methodology. Students at all grade levels showed a marked improvement from the beginning to the end of the project, with scores showing between a 20% to 50% increase.

"This special program combining science and literacy has provided opportunities to seek out and research new technology and resources to help children increase both their academic aptitude and enjoyment of learning in these specific content areas."

– Tim Hitchcock, Science Lab Teacher, Brooklyn PS 288

World's Largest Weather Network



Why Weather? Weather Is an Interdisciplinary Subject

Weather integrates basic science and math concepts as well as a working knowledge of geography and history. As students progress through their projects, they develop science concepts and literacy skills to understand these core principles and apply them through the WeatherBug Achieve program and other online resources.

What started in 2003 as a meteorology club for New York City Region 7 created by Joe Scarmato, regional instructional specialist of science, evolved into an interdisciplinary science program that impacted students across the region. Joe worked with Charlene Smith, also an instructional specialist in that region, to drive the program and assure its ultimate success. By 2006, the project was extended to all NYC schools.

The Outcome:

Participants of the project flourished, gaining new levels of academic achievement as well as new levels of independence in choosing their own subject matter and learning style. Friendly competition enhanced relationships among students and teachers.

In the first year, the exam scores of participating students were higher across the board than those of non-participants in mid-project testing. In addition to higher test scores, the students' interest in the subject matter increased – in weather, science, reading, writing, math, social studies and geography. Teacher feedback was overwhelmingly positive. School administrators credited the program with adding tremendous value to their curriculum and boosting students' self-confidence and team spirit.

In the second and third years, pre-tests and post-tests were conducted, with similar results. All classes raised their scores from the beginning to the culmination of the project.

In the third year, the project was expanded to all schools in the NYC area. Professional development time and project structure were increased, with more in-depth student project requirements. Working independently or in pairs, students completed projects and shared them at a school-based fair, and the best projects from each school were shared at the Project Share Fair. The caliber of projects has increased each year. As achievement results continue to show marked improvement with each year of the project, everyone is successful – students and teachers alike.

"WeatherBug is extremely pleased to be an integral part of this project," said Bob Marshall, WeatherBug president and CEO. "Improving the quality of life has always been our mission, and helping our schools to assure our children's education and self-confidence is the goal of WeatherBug Schools."

"This hands-on approach to science, social studies, math, language arts, visual arts, technology, vocabulary and reading helps students develop skills in core subject areas. The difference in the children's capabilities, knowledge and enthusiasm for learning between now and the beginning of the project is very obvious to me."

– Lauren Redmond, Teacher, PS 176

