

Urban Oasis Yields Student Achievement



Each autumn, the yellow-rumped warbler arrives on the campus of Leo Politi Elementary School in downtown Los Angeles. Throughout the winter, their clipped “snip, snip” is a part of campus life: tiny bursts of grey, white, and yellow flitting from the school’s coastal live oaks to California sycamores. By mid-spring they are gone.

When will they return? Your best answer will assuredly come from a Leo Politi Elementary student who will explain that in 2011, the first yellow-rumped warbler arrived on October 14 during second recess. It wasn’t seen, but Jerry, a fifth-grader, recognized its call. The same students could rattle off information from the warbler’s fact sheet, with conversation also extending to other flora and fauna.

How could the students at an inner-city school with a nearly 100 percent free- and reduced-price lunch population, located in one of the park-poorest neighborhoods of L.A., know the natural world so fluently?

Using Space and Time Wisely

In 2009, Leo Politi Elementary had produced four years’ steady growth in language arts and mathematics on state tests. However, the laser-like focus on language arts and mathematics also produced an unwanted casualty—the science scores were among the lowest in the district, with merely 9 percent of fifth-grade students scoring proficient on the California Standards Test, and none scoring at the advanced level.

In then-principal Brad Rumble’s second autumn leading the school, administrators and teachers collectively decided that they could not stand

for these science scores to continue. Teachers indicated that the school’s lack of devotion to professional development and collaboration in science had eliminated any possibility of student success. So, while science had once been the domain only of those teachers with time to fit it into their crowded schedules, now teachers assembled daily schedules that ensured science instruction could occur.

However, teachers still could not engage students in deep scientific inquiry. Because set-up and clean-up were so time-consuming, many teachers had avoided scientific experiments. To address the time and space challenge, Rumble converted an unused classroom into a lab classroom and staffed it with a full-time teacher assistant to handle set-up and clean-up in the lab. With multi-grade science experiments under one roof, the room represented a place of wonder for students.

By 2009, the Los Angeles Audubon Society had a well-established environmental stewardship program at Dorsey High School that involved inner-city secondary students in life science explorations at a high cognitive level. The program’s leaders wanted the Dorsey High students to extend their learning by working with younger students.

Enter Leo Politi Elementary, an eight-acre campus with 5,000 square feet of dying Bermuda grass begging for attention. An \$8,000 grant from the U.S. Fish & Wildlife Service, co-written by Los Angeles Audubon and the school, yielded a collaboration between Dorsey High students and the school’s gifted students to design and plant a native California habitat. They used discretionary funds to provide weekly extended learning sessions taught by an upper-grade member of the faculty. Regular visits from the Dorsey students involved sampling soil, researching the campus’ natural history, and determining which species of native flora would best suit the habitat.

Engaging Student Curiosity

Establishing a natural sanctuary in Leo Politi Elementary’s schoolyard created

a variety of possibilities to make observations and to wonder about the world. By connecting students' lives to the science standards (with both a text- and activity-based curriculum), the faculty sought to ignite a culture of curiosity within the school.

By the time the Cleveland sage and bladderpod were placed in the soil, faculty realized how the habitat captured students' curiosity and encouraged critical thinking. The flow of rainfall on a gentle slope figured into which plants would be planted high and low. The discovery of worms led to discussion of their role in the ecosystem.

The restored land required no sprinklers, no lawnmowers. Hikes through the winding trails of the habitat spawned student questions, and student observations informed classroom discussions. Teachers from entire grade levels brought their students to the habitat for a language arts unit opener on city wildlife or the changing seasons.

Collaboration Yields Results

The habitat offered teachers multiple gateways to collaboration. Funded through private and corporate donations, an Audubon room housed an environmental resource person, an on-campus ambassador to connect the habitat and students. A retired teacher worked in the Audubon Room twice a week, exploring the habitat with students and pushing in to all grade 3 classrooms.

Rumble discussed ways to engage students outdoors—both during and after school—with lead science teacher Mr. Aguirre. The fourth-grade students of Mrs. Dowell's class explored how the campus would have appeared during Native American times, while second-grade teacher Mrs. Salinas examined what the city had become over time. The gifted students in Mrs. Dowell's extended learning sessions researched thriving plants in the habitat and the native insects they attract. In addition, Los Angeles Audubon provided science illustration classes taught by a biologist for upper-grade students.

The principal's role in these collaborative efforts was to mediate most obstacles that confound implementing an environment-based program such as lack of funding, persistent standardized testing, and meager time for teacher teams to plan.

When community members take a student-led tour of the school's sanctuary or appreciate displays of students' artwork, they enhance the commitment students make to their work. Intentionally connecting classrooms to the schoolyard provides a literal common ground upon which school and community can gather and compose a "user's manual" of the natural world.

Teachers' collaborative efforts to build a science program worthy of the school have succeeded. Three years of results showed sustained academic achievement in science. In Spring 2010, 49 percent of our fifth-grade students scored proficient or advanced on the state's science test. That figure was 53 percent in 2011 and 48 percent in 2012. The data show a direct correlation between embracing the outdoors and a sustained and vast improvement in fifth-grade science scores.

Creative use of the schoolyard as a living laboratory adds much to students' background knowledge across subjects. While students become experts in the habitat, they build self-confidence, which motivates them to be experts in other areas as well.

A powerful tool to improve achievement may be the lowest tech of all: To remove a portion of blacktop, involve students, teachers, and families in the planning and planting of a native habitat, and consider it a blank canvas for educators. **P**

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