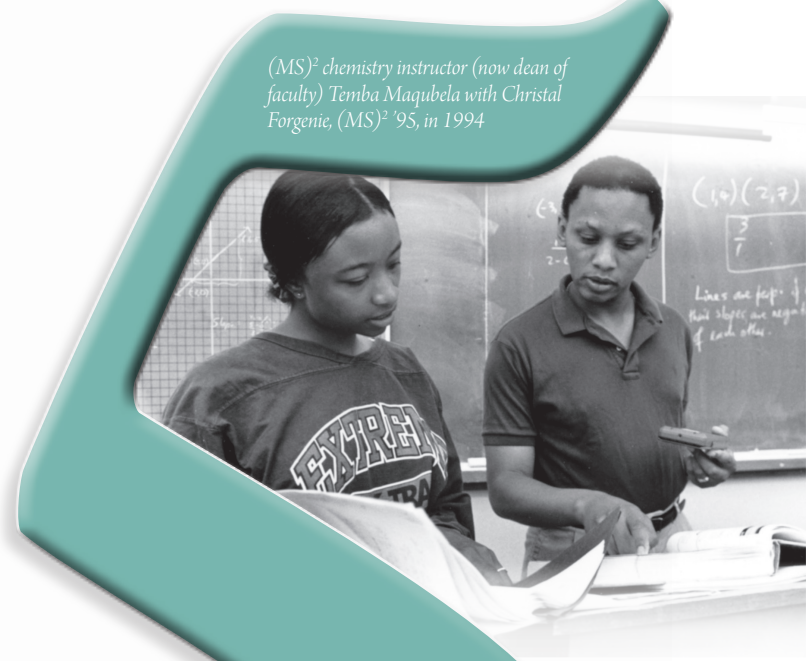


Celebrating



(MS)² chemistry instructor (now dean of faculty) Temba Maqubela with Christal Forgenie, (MS)² '95, in 1994



Years of Changing Lives

by Sarah Zobel

for Minority Students, or (MS)², Forgenie had never met someone “who lived on a reservation, a Latino from Texas, or even anyone from Tennessee,” she says, laughing.

Once she moved past the culture shock, Forgenie, (MS)² '95, embraced the program's math and science courses, which allowed her to tackle advanced placement classes at her public high school. It also opened her eyes to new academic possibilities.

“I'm 100 percent sure that I wouldn't have gone to Brown University” if not for the three summers at (MS)², she says; she went on to Stony Brook University School of Medicine, and then to a residency at Babies and Children's Hospital at Columbia University Medical Center. She's now assistant

attending pediatrician at Montefiore Medical Center and has mentored pre-med students, pointing to her time at PA as motivation.

“(MS)² was crucial in preparing me to serve as an example for others,” Forgenie says, noting her additional time in the program as teaching assistant and teacher. “I saw myself as part of a huge, diverse community that I wanted to—I had an obligation to—give back to.”

A Farsighted Idea

(MS)² was established in 1977 under then-Headmaster Theodore Sizer through a grant from the William Randolph Hearst Foundation. The idea, at its most basic, was to prepare more African American, Latino, and Native American students for math and science courses and careers. In its inaugural year, 26 students came to campus. The program, says former director (now PA dean of faculty) Temba Maqubela, is a full-school demonstration of PA's *non sibi* motto. “It's really an expression of what we mean by ‘a private school with a public purpose,’” he says.

Each year students from 11 cities are invited: Atlanta, Baltimore, Boston, Chicago, Cleveland, Fort Worth, Lawrence (Mass.), Louisville, Memphis, New York City, and Washington, D.C. Native American students may apply from anywhere in the country. The program is evenly divided among the three ethnicities.

(MS)² has been called an academic boot camp—an apt description, given the weekly 10 hours of math and science and three hours of English or college prep instruction, plus roughly that much time in homework. First-year students study algebra or pre-calculus and biology; second-years study pre-calculus or calculus and chemistry; and third-years study calculus AB, calculus BC, or special topics in mathematics, as well as physics. Though students all follow the same curriculum, in each math class they are placed in one of three levels based on test scores. First- and second-year students also enroll in English, while third-year students are required to take part in a special

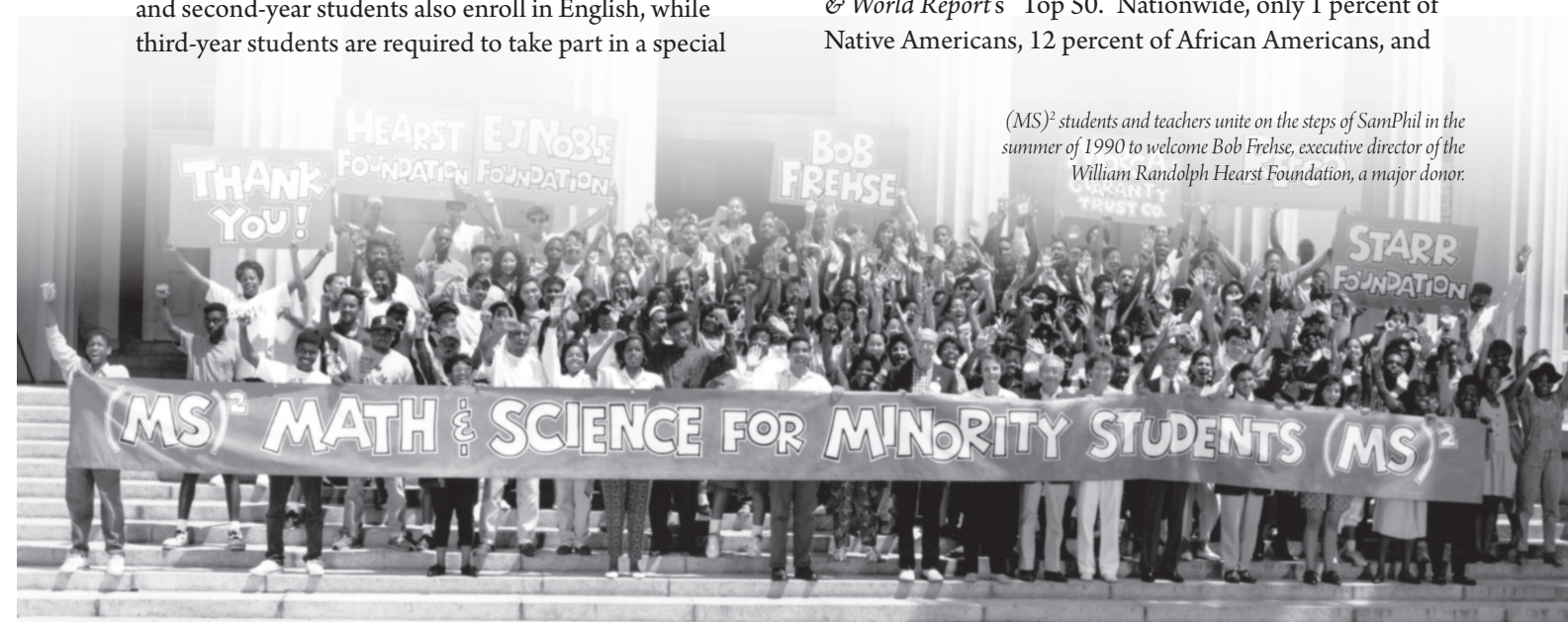
college counseling class. There, they learn about the entire application process and visit six or seven college in the Northeast. In 2012, those visits were to Boston College, MIT, Holy Cross, Worcester Polytechnic Institute, Syracuse, RPI, and Cornell.

“We make them dress up,” says (MS)² Director Dianne Cruz of the students when they're on college campuses. “It sets them a little bit apart from everyone else who's there to visit.”

The Numbers Speak Volumes

They're already set apart from their peers: 98 percent of (MS)² graduates have gone on to college; of those, more than 50 percent have attended schools ranked in *U.S. News & World Report's* “Top 50.” Nationwide, only 1 percent of Native Americans, 12 percent of African Americans, and

(MS)² students and teachers unite on the steps of SamPhil in the summer of 1990 to welcome Bob Frehse, executive director of the William Randolph Hearst Foundation, a major donor.



Faces of (MS)²

Dr. Christal Forgenie, above—left and right, raised by Trinidadian parents in Prospect Heights, Brooklyn, grew up surrounded by first-generation Americans and people who looked and spoke differently from her. But until she came to PA in 1993 to take part in Mathematics and Science

13 percent of Latinos self-report that they plan to continue their education after high school.

“There were times, especially my first year, when I didn’t know if I could make it,” says Lawrence native Jerisson José De La Cruz, (MS)² ’11, now a Rochester Institute of Technology freshman studying interactive games and media development. “But the dream of making honors all the way through and getting that sash kept me going.”

(MS)² classes are taught by PA faculty and teachers from area public schools. Teaching assistants, an integral part of the program, are recent college graduates; this year, three (MS)² alums were among them, including one Native American, the first ever to serve in that capacity. Days begin with a 7:15 a.m. meeting and end at 10 p.m., after evening study hours.

But it’s not all work, all the time. Together with Summer Session students, (MS)² scholars enjoy special afternoon and evening recreation-based activities, including swimming, softball, music, and dances, as well as outings to baseball games, amusement parks, and downtown Boston. Students are required to take part in those activities, because social growth is an integral part of both programs. The fact that Summer Session students come from all over the world adds a dimension to (MS)² that academic programs elsewhere might not enjoy, says Cruz, and students are aware of that.



(MS)² is a highly selective program—

8%

of the applicants each year are accepted.

Kezi Barry '02

Each summer, every student engages in

120

hours of intense math and science instruction.



Venus Velez-Vann, (MS)² '86

“Being from New York City, I frequently encountered people from different countries with different cultures,” says Arnold Principal, (MS)² ’86. “But Andover presented the opportunity to learn from them. We developed friendships and appreciated the similarities as well as the differences.”

Growing “Champions” of the Program

If there’s a negative to the program, it’s only that participants want more. East Harlem native Venus Velez-Vann, (MS)² ’86, explains: “(MS)² helped me develop better study habits. But it also made me realize how under-challenged I was at my school, and I remember wishing I could study at Andover year-round. I felt a little cheated.”

Although the students are welcome to apply to PA for the school year, says Maqubela, that would create an unintended “brain drain” at their home schools.

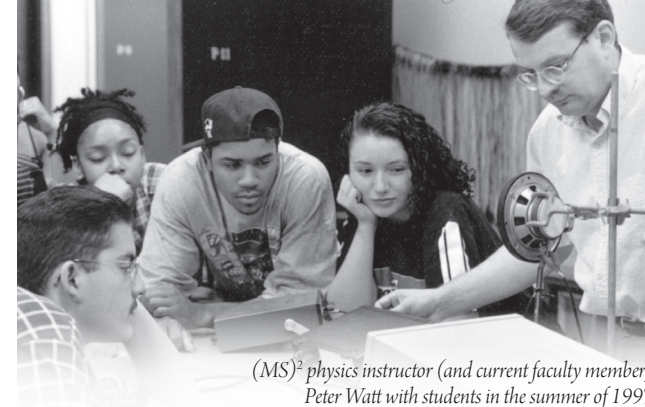
“It’s very important that when they’re done with (MS)², they go back to their schools and their communities and they uplift their peers,” he says, calling students the “champions of the program.” In essence, they serve as advance recruiters: “You only sell the program once to a community,” Maqubela explains, “and then the champions take over. It’s a form of community service for them, a way to pay back.”

Says Principal, “I made it clear to [my friends at home] that I wasn’t smarter or better than them, but had taken advantage of an opportunity given to me.”

Clearly, the champions have done their job well—the competition to get in is stiff: this year, 450 students completed pre-applications for 36 first-year spots. Applicants must demonstrate an interest in math and science, show self-motivation, and be willing to live away from home for five weeks each summer. In addition, they must demonstrate financial need—the entire cost of the three-summer program, from airfare through pens and pencils, is funded by scholarships.

Although (MS)² has an endowment, the program relies on gifts of approximately \$250,000 annually to meet the per-student cost of \$6,000.

Fortunately, (MS)² inspires loyalty among donors—even those who didn’t participate in it. Twins Margaret Johnson-Gaddis and Winifred Johnson Sharp, members of the Abbot Academy Class of ’54, established the Double J Ranch Fund in 2004 to support (MS)² Native American students from the Four Corners area of the Southwest. And Joshua Sommer, whose connection to PA is just one term in Summer Session, also contributes regularly.



(MS)² physics instructor (and current faculty member) Peter Watt with students in the summer of 1997

“The more we invest in smart low-income teenagers and give them the benefit of an Andover education,” Sommer says by way of explanation, “the more we will reap the benefit of a diverse and vibrant economy.”

Many graduates go on to careers in related fields, including engineering, medicine, and IT, but others find themselves applying (MS)² to their life’s work in less expected ways. Principal graduated from Holy Cross and studied in Taiwan. He worked for Fidelity Investments, Lehman Brothers, and Bank of Tokyo Mitsubishi before starting his own firm, SYPCAP, which manages investments of \$70 million for high-net-worth individuals and nonprofits. Velez-Vann studied at Wesleyan and earned an MBA degree at Baruch College’s Zicklin School of Business, and now works as an education consultant.

“The program nourished my love for math and science,” Velez-Vann says of (MS)², “but it also increased my enthusiasm for writing and helped spark my interest in politics and social justice.”

(MS)², which now counts more than 1,100 alumni, has inspired similar programs around the country, including SMASH in California, HS² in Colorado, and Harvard’s Crimson Summer Academy. Individuals, foundations, and even corporations, says Maqubela, have realized the benefit that can come from reaching kids early in high school and seek guidance from (MS)² administrators in starting their own programs. But Maqubela scoffs at the notion of the so-called “achievement gap,” the reputed disparity in education levels among different racial and socioeconomic groups.

“You cannot talk about an achievement gap at age 15,” he says. “It’s only a preparation gap. And if you have enough resources, you can close that preparation gap. (MS)² has shown us how it’s done.”

Sarah Zobel is a Vermont-based freelance writer whose work focuses primarily on health and education. Her articles and profiles have appeared in a variety of outlets, including Boston Globe Magazine; O, The Oprah Magazine; Utne Reader; Northfield Mount Hermon Quarterly; and Vermont Medicine. She’s an alumna of NMH and Mount Holyoke College, but her mother (Deborah Bethell Wroth '53) made sure she memorized Abbot’s school song at an early age.

(ms)² 35 Years

Jodi Archambault Gillette, (MS)² ’84, is currently serving as the Obama administration’s senior policy advisor for Native American Affairs. Gillette, a member of the Standing Rock Sioux Tribe, was also the first Native American associate director of Intergovernmental Affairs, as well as deputy assistant secretary for Indian Affairs. She played a key role in the White House Tribal Nations Conference in 2009 and 2010.



Gillette came to (MS)² from the Pine Ridge Indian Reservation in Kyle, S.D. (her brother, Dave, followed her). She credits the “high expectations, structure, and outstanding tutorial support” at (MS)² with moving her out of her academic comfort zone, and went on to earn a BA degree at Dartmouth and a master’s in public policy at the University of Minnesota. Like many graduates before and after her, Gillette appreciates the social lessons as much as she does the classwork, and says she remains grateful today for “the various perspectives I would not have understood had I not attended (MS)².”

Faith Kniffley, (MS)² ’05, and Charles Shannon, (MS)² ’06, met at Andover during the program and tried to keep their relationship under wraps. But the hours they studied together showed—their science instructor observed that Faith’s homework looked a lot like Charles’s, and vice versa. They’ve since married—the first two (MS)² graduates to do so—and are now part of the Teach For America program in Memphis. In keeping with the theme that brought them together, his subject is math and hers, biology. Next year they’ll head to New York, where Charles, a Harvard graduate, will work as an investment banker at Morgan Stanley; Faith, who has a psychology degree from the University of Louisville, is considering pursuing a master’s.



Gill Talbot

One current student, Shawn Pacheco, (MS)² ’13, was surprised to discover a newfound appreciation for the English classes he takes at Santa Fe Indian School in Santo Domingo Pueblo, New Mexico. While he’s enjoyed his chemistry class and lab time at (MS)², it was the English course that pushed him most.