

Commitment to Mission

Much of what makes DSST so impressive is, in fact, unique, from its modern architecture to the dedicated students and faculty inside. Nevertheless, Kurtz contends that the most essential aspects of the school can, and should, be replicated. Again and again, he returns to his contention that the core of what makes DSST successful is not the building or the laptops carried by every student, but the school culture and expectations. He recalls the school's first five months when it was housed in the basement of the former Macheboef High School, a sub-standard school building. The learning environment that produced the school's high CSAP scores was launched in a non-descript school building. "What is replicable in any school setting," says Kurtz, "are our clear values, an intentional community that sacrifices me for we, a core liberal arts curriculum, high academic expectations, and systematic accountability and support to achieve student learning goals."

Colorado Children's Campaign's Commitment to Replication

With support from the Bill & Melinda Gates Foundation and our many generous local funders, the Colorado Small Schools Initiative (CSSI) at the Colorado Children's Campaign has helped to create DSST and many other small schools in Colorado. Through efforts to convert large high schools into small high schools and to open new small schools, CSSI has been able to identify the common threads listed below in successful new schools. Together, these represent the criteria necessary to replicate schools such as DSST.

- Start with a clear mission focused on high academic achievement for all students.
- Select a research-based school design that has proven successful in raising student achievement and that can be adapted to fit the local context.
- Prioritize principal leadership that will keep the mission central to everything that the school does and hold every member of the school community accountable to this mission.
- Open with a strong school culture that explicitly sets and reinforces a solid set of core values for all members of the community.
- Set high academic standards for all students with a rigorous core academic program and performance standards.
- Implement systems for diagnostic and ongoing assessment to measure student progress towards academic outcomes and to guide teachers' instructional decisions.
- Provide a wide array of support structures to ensure that all students can meet high academic standards and remain contributing members of the school community.
- Measure success, primarily though not exclusively, in terms of student academic growth and achievement.

This research brief was produced by the Colorado Children's Campaign.



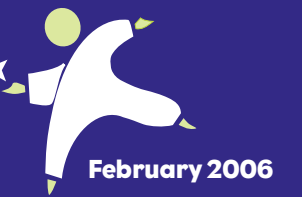
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Creating Hope and Opportunity in Colorado, One Million Kids at a Time



Denver School of Science and Technology: A High School That Works

When you see the new Denver School of Science and Technology, the first thing you're likely to notice is the building's impressive design. The school looks more like a Silicon Valley biotech firm than a typical new Colorado high school. Indeed, the innovative structure, modeled on a similar facility in San Diego, has already garnered numerous architectural awards. While the outside structure is indeed amazing, it's what you see inside the building that makes the school truly remarkable.

DSST opened in the fall of 2004 to provide a solid academic foundation to a diverse student body. The school was founded by David Greenberg, Amy Slothower, and a small group of state leaders, with significant support from the Bill and Melinda Gates Foundation, John Sie, Denver Public Schools, and the Colorado Children's Campaign.

As a public charter school in the Denver Public School district, DSST serves a broad spectrum of students from the greater Denver area. About 60 percent of DSST's students are black or Hispanic and about 44 percent come from low-income families. Within a single year, DSST's CSAP scores have already demonstrated that the school is preparing its diverse student body to meet state standards at a much more consistent rate than almost any other school in the state.

DSST's "secret of success" is no secret; in fact, it's just the opposite, according to Head of School, Bill Kurtz. DSST is explicit about its mission and steadfast in its adherence to this purpose. "Why do we exist? To address the achievement gap, particularly in math and science, in a powerful integrated learning community. We expect that all students, regardless of family income, race, or academic preparation will meet state standards, and attend and graduate from college."

The Commitment to School Culture

DSST's mission demands that all kids work towards a high bar: graduating from high school with the skills to succeed in college. All students are expected to attain grade-level proficiency in all academic areas. But high expectations must be paired with support for students to meet those high expectations. "The clear vision and clear goals are a set of systems, and they require a culture to support them," according to Kurtz. At DSST, the onus is on the school to create a culture that will support all students to reach the school's goals.

"Creating a culture in the school is the first thing that must be done, and then student learning can take hold," says Kurtz. "It's a 'core business approach' where the core business of the school is a focus on culture and learning." Culture must be built from the ground up. All members of the school community – teachers, administrators, and students – are expected to participate in creating an atmosphere of respect, integrity, and accountability.

DSST's school culture is grounded in a set of core values: respect, responsibility, curiosity, integrity, doing your best, and courage. When a student applies to DSST, both



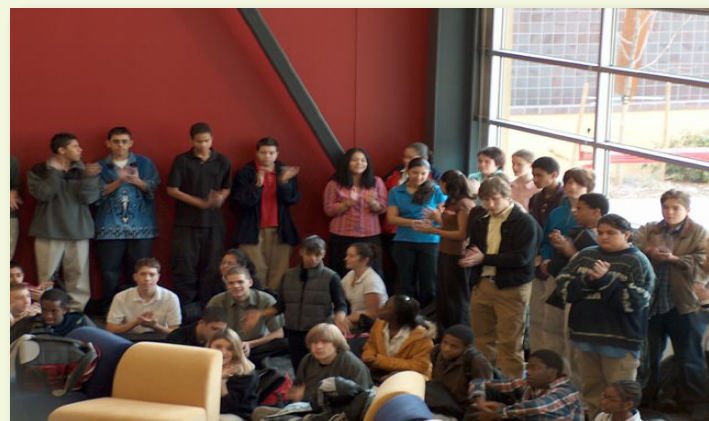
student and parent must sign a contract that asks them to commit to a set of expectations that are essential for the school to “uphold our mission.” Well before those students arrive on campus in the fall, all faculty and staff members spend two weeks together exploring the core values, developing their own sense of community and preparing for the year. School then opens for students with two-days of community culture building retreat). During this time, students are inducted into the school culture and community through a variety of activities. By the first day of classes, therefore, every member of the DSST community enters the building with a firm knowledge of and commitment to the core values.

DSST has developed many critical systems and structures to ensure that the community regularly reaffirms and reinforces the core values. The school day begins with Morning Meeting, a 15-minute all-school meeting when the community gathers in a circle to share their accomplishments, challenges, and even regrets. Visitors are often struck by the daily lateness apologies offered by both students and staff, and recently, much of the circle was moved to tears by a student’s apology for theft and vandalism. After being suspended for several days, the student apologized for his actions and asked that the community accept him back into its fold. He outlined the consequences he would accept and the ways in which he would change his behavior, as well as the types of support he would need from the community. When the entire school voted to re-accept him, they also made the commitment to support him in his efforts to prove himself worthy of membership in the community.

The advisory system reinforces the school’s support systems and connects these to students’ lives beyond school. Every student is assigned to an advisor who provides individualized counsel, guidance, and support. The advisor also serves as the primary contact for parents and facilitates communication between parents and the school. Twice a week, students have a 50-minute meeting in their advisory groups of 10-12 students. These sessions allow time for academic planning, goal-setting, team and community building, college preparation, and digital portfolio building.

DSST’s small size is critical to the powerful sense of community that exists. The school opened with a 9th grade class of 125 students and will add a class each year until 2008-09 when the school reaches its capacity of approximately 430 students. As one teacher attests, “Too many problems in great big comprehensive high schools arise because of a lack of belonging to a community, a group, an organization. [Students need] a place that is safe, where they’re comfortable, where the results are clear, where they belong.”

Students clearly feel safe at DSST, and there are few cracks for them to slip through. Despite DSST’s high expectations, the school has one of the highest retention rates of any Denver high school. Every student exists within a set of concentric circles, surrounded by an advisor, an advisory group, and ultimately, an entire community.



The Commitment to High Standards for All Students

DSST’s web of support begins with a strong school culture, yet it extends to provide a full range of academic support structures and systems as well. The admissions process begins with a lottery in which students are selected regardless of their level. The admissions process gauges student commitment to the core values through the use of a contract, and incorporates diagnostic testing to assess students’ literacy and math skills. Students who do not demonstrate grade-level proficiency are required to attend summer school, so that they can start school as prepared as possible. Approximately 100 of this year’s 130 9th graders attended the three-week summer course prior to the school year.

Those students who are still not performing at grade level by the beginning of the year take additional courses in math and/or literacy, to supplement and reinforce the required grade-level courses. These seminars are goal oriented and attempt to move students as quickly as possible towards proficiency in writing, computation and algebra skills. These seminars do not replace the college preparatory math and English classes, rather serve as a supplement to them: : “We can’t lower our expectations and put kids in remedial classes. It’s a 30-second decision: if a ninth grader is assigned to a remedial class, his chances of attending a four-year college are basically over,” says Kurtz. When students attain proficiency, they test out of seminar and move into an elective for the next trimester.

At DSST, all students take the same rigorous set of courses that comprise the core academic program. The minimum required coursework exceeds the highest pre-collegiate requirements set by the Colorado Commission on Higher Education and includes 4 years of humanities, math, and science and 3 years of Spanish. Teachers focus on creating a limited number of high-quality courses, rather than the smorgasbord offered at many large comprehensive high schools. “You could have 500 course selections, but it’s like going into a restaurant serving 500 entrees,” explains Kurtz. “You know none of them are

going to be very good. We’re working hard enough to get 25 great courses.” All students will take these 25 great courses because DSST has chosen the research-based approach of differentiating or individualizing instruction within the classroom, rather than tracking some students by ability into less rigorous courses.

Just as all classes are demanding, so too are the expectations for student preparation. Teachers at DSST expect that every student will come to class prepared everyday. If a student comes to class without a book or is late, he is assigned to Silent Lunch, missing out on that highly-prized time to socialize with peers. If a student comes to class without her homework, she must attend College Prep, an after-school program

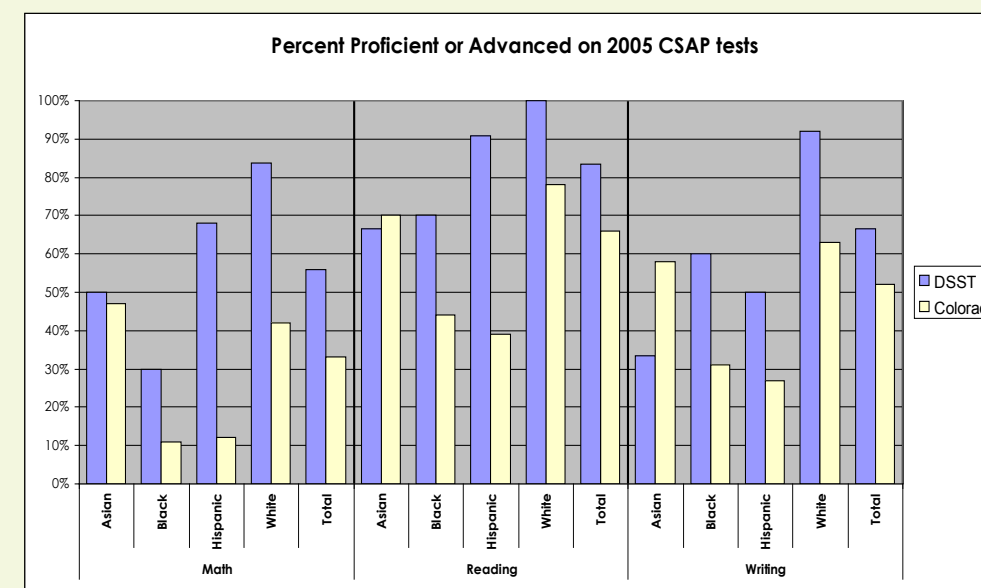
during which students complete homework or receive extra help from the teacher on duty. If, despite all of these measures, a student still fails a class, he could receive after-school tutoring until he is able to raise his grades.

Parents enter into the academic conversation both formally and informally, through regular contact with the advisor and parent conferences twice a year.

DSST leaves nothing to chance when it comes to student learning. The school does everything in its power to guarantee that all students will realize the mission of the school: every student will meet state standards and graduate with the skills necessary to attend and complete college.

The Commitment to Student Achievement

The potent combination of high standards and steadfast support at DSST has produced compelling results. In reading, writing, and math, DSST’s students outperform those across Colorado by a wide margin. For example, DSST’s Hispanic students averaged 70 percent proficient across these subject areas on state achievement tests, compared to a statewide average for Hispanics of 26 percent, and DSST’s black students achieved proficiency at nearly twice the rate of black students statewide.



DSST’s achievement scores are even more impressive compared to those of other schools in its own school district. In 2004, DSST’s 9th grade class was the highest performing class in Denver on the math CSAPs and finished second to a magnet school in reading and writing. Only Denver School of the Arts -- a school that serves a much less diverse (34% Minority) and more affluent population (12% free lunch) -- had higher standardized test scores than DSST. DSST was the only Denver high school to earn a “significant growth” designation on students’ CSAP scores growth from year to year. African-American students at DSST were 5 times more likely to be proficient in math, 3 times more likely to be proficient in writing, and 2 times more likely to be proficient in reading than his or her counterpart in DPS. A Hispanic-American student at DSST was 13 times more likely to be proficient in math, 4 times in reading, and 3 times in writing than his or her counterpart in DPS. And DSST had the highest percentage of students scoring “advanced” on the math CSAP of any high school in the city.

DSST recently completed its admissions lottery for 2006 freshman class. Applications for admissions are up 70% over last year, with over 320 students from over 90 different schools in the metro Denver area applying for 9th grade admissions. Only 18 of those schools are DPS district schools, and only % of applicants came from DPS district schools. Over 40% came from private schools and out-of-district public schools. 40% of the applicant pool was low income students.