

HP technology supports 1:1 PC program for motivated students

HP notebook PCs and Tablet PCs help Denver-area students excel in demanding science and technology curriculum



“The technology we have from HP has made a true difference in helping our students cross the digital divide and excel academically. Many of our students face income and access barriers in their everyday lives. At DSST, with the help of HP, they can push those barriers aside and focus on doing great college preparatory work.”

– Bill Kurtz, Head of School, Denver School of Science and Technology

HP customer case study:

Denver School of Science and Technology turns to HP notebook PCs and Tablet PCs to help build 1:1 computer-supported curriculum for its students

Industry: Education

Objective:

To fulfill its mission of providing a top-quality, college-preparatory education, DSST needed to ensure that each student had access to a reliable, high-performance mobile PC.

Approach:

DSST acquired more than 400 HP notebook PCs and HP Tablet PCs for students, faculty and administrators.

Business benefits:

- Premium technology on a 1:1 basis attracts and motivates students.
- Students are better prepared for college and careers.
- Computer problems are virtually nonexistent, keeping students productive.

Founded in 2004, Denver School of Science and Technology (DSST) in Colorado is a public charter high school with high expectations for its students. One hundred percent of DSST students are expected to be accepted by a four-year college.

That ambitious goal and the resources and facility to support it attract hundreds of Denver students to apply each year for just 130 openings. Students are chosen by lottery, and more than 40 percent come from economically disadvantaged households.

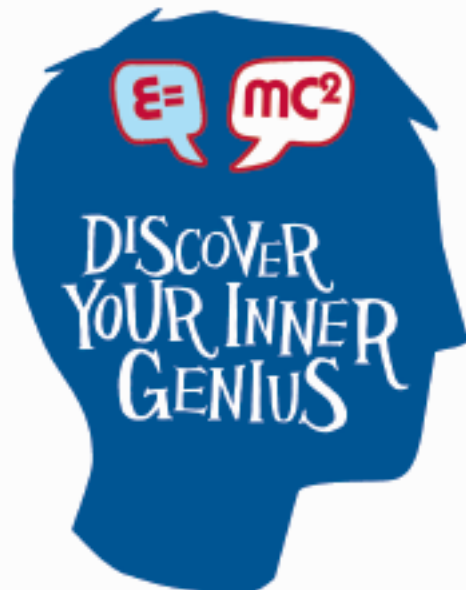
Income barriers, however, don't stop them from excelling in school. Students who enroll at DSST soon discover a new world of learning with a curriculum supported by a 1:1 student-to-PC ratio. Those PCs: HP notebook and Tablet PCs.

HP supports 1:1 PC-supported learning

According to Head of School Bill Kurtz, DSST is demonstrating that a 1:1 technology-rich learning environment with individualized instruction can elevate student performance far beyond the norm.

“We don't think of technology as something that helps with splashy projects, like a new Web site or Flash presentation. We think of it as more encompassing and integral to the core curriculum. It's a foundation that allows new ways to teach and new ways to learn and communicate,” he says.

Each DSST student is provided with a mobile PC with wireless networking capabilities. Freshmen and sophomores each receive an HP notebook PC, while juniors and seniors each use an HP Tablet PC. Tablet PCs were deemed more appropriate for older students taking math and science classes requiring advanced note-taking capabilities.



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HP recommends Windows Vista® Business

Computer-assisted learning takes place across the modern DSST campus. “We have ubiquitous wireless access throughout the school and in the courtyards, so students and faculty can carry their PCs with them and stay productive and connected at virtually any point on school grounds,” Kurtz notes. “And because they have wireless access 24/7, students can work on projects and communicate before and after school hours while on site.”

Kurtz knows the school and its students are fortunate. The 1:1 ratio of PCs to students was made possible in large part through an HP grant designed to improve the availability of PC technology in high schools. DSST also received a \$1.5 million gift from the Bill and Melinda Gates Foundation, which helped fund the start-up of the school.



“The assistance we’ve received has been invaluable to achieving our goals,” says Kurtz. “This school provides an outstanding learning environment because of the organizations that support us and the dedication of our faculty.”

Classroom instruction made easier and more effective

Part of that outstanding learning environment includes adapting the coursework for each student, based on individual needs. PCs support that ability.

“Our teachers can look at data gathered in real time from each PC to assess what areas the students need to focus on as a group and on an individual basis,” Kurtz explains. “The 1:1 program enables us to analyze that data and change instruction so that the kids are getting instruction on coursework they haven’t already mastered. There is a much greater sense of control and understanding in terms of how to help each student do his or her best and overcome any roadblocks they’re experiencing.”

Examples of advantages abound

To enhance classroom learning, teachers at DSST use various software programs including Microsoft® OneNote for taking and sharing notes via HP Tablet PC. A user can write notes on the tablet screen with a stylus pen, then save the notes to an organized file system that is accessible to other Tablet PC users on the network. Teachers can also make notes to an e-textbook or other instructional document and then distribute the file to students with just a tap of the screen.



Customer at a glance

About Denver School of Science & Technology

Launched in 2004 with a mission to increase the number of disadvantaged students attaining college science and liberal arts degrees, DSST is a public charter high school that relies on computing technology to support its curriculum. The school enrolls students from across the Denver metropolitan area and is renowned for its focus on science and math coursework. DSST is currently on track to achieve its stated goal of 100 percent college enrollment among graduating seniors.

For more information, visit www.scienceandtech.org.

Contact the HP Customer Reference Program, 281-514-5755, for more information.

Students and faculty also use Camtasia Studio for lesson reviews. Camtasia allows instructors to record a screencast of their HP Tablet PCs as they work through a series of problems or equations. Students can then download and watch the screencast to see how the instructor walked through the problem, step by step. Kurtz rates it as one of the most effective software tools to complement the curriculum.

"It's incredibly powerful," he comments. "It's the kind of tool that showcases the HP Tablet PC's amazing functionality. We also use it in math and physics classes for test reviews, so a student can replay the steps to see where he or she missed a particular answer."

Kurtz also points out that the HP hardware runs even the most sophisticated of software applications seamlessly and without any slowdowns. That includes software for helping students measure chemical reactions and a digital textbook for physics that includes simulations and interactivity.

"Some of these are pretty robust programs that require fast processors and a lot of memory," he notes. "I haven't seen any issues."

DSST's HP notebook PCs and HP Tablet PCs feature a three-year limited warranty, ensuring the support of HP Total Care throughout the product life cycle. "The

hardware is reliable, and my experience with HP service has been positive since we opened the school," Kurtz notes. "If we have questions or need information, we can get answers almost immediately."

HP helps drive academic results

Student achievement is impressive. In a 2006 statewide assessment, DSST students performed nearly 30 percentage points better in math and almost 20 points better in science* when compared to





students overall. Ninety-six percent of students in the school's first senior class have been accepted at a four-year college, and the goal of 100 percent is within reach.

"The technology we have from HP has made a true difference in helping our students cross the digital divide and excel academically in new and innovative ways," Kurtz says. "Many of our students face income and access barriers in their everyday lives. At DSST, with the help of HP, they can push those barriers aside and focus on doing great college preparatory work."

That mission will soon extend beyond DSST. Plans are under way to launch an adjoining middle school using HP PCs in the classroom. Kurtz beams at the prospect of getting high-performance technology in the hands of motivated students at a younger age.

"Our model has proved very effective, and with the support of HP I expect that we'll see great results with the middle-school students as well," he says. "These kids will be ready for even bigger challenges when they get to high school."

Kurtz's advice for other schools considering their own 1:1 student-to-PC initiative? "Talk to HP. Their products have been very effective for us, and HP understands education. They can implement and service what they sell, which allows schools to focus on education, not technology."

* 2006 Colorado CSAP – <http://www.scienceandtech.org/results.html>

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