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SUCCESS STORY

HIGHLIGHTS

Organization

Linlithgow Academy, Scotland
 Payne Elementary School, CA
 Brooktree Elementary School, CA
 Hillsdale Year Round School, CA
 Mountain View Elementary School, CO
 Chelmsford High School, MA

Industry

Primary and Secondary (K-12)
 Education

Software

Netscape Software Navigator™
 StarOffice™ 5.2
 Sun Ray™ Server Software 1.1

Configurations

Sun Enterprise™ 250 server with
 2 CPUs, 400 MHz, 2 GB of RAM
 30 Sun Ray™ appliances

Key Benefits

- Assists schools in utilizing network computing technologies
- Enhance learning experience for teachers and students with technology
- Prepares students for the world of work in the new economy
- Develops and supports 'train the trainer' and mentoring models of professional development for classroom educators

PREPARING STUDENTS TODAY FOR THE TECHNOLOGY OF TOMORROW

Sun Microsystems' Global Community Development Department created the 'Open Gateways' grant program. As a company deeply committed to employee volunteerism, it is a natural outreach to the communities where Sun employees live and work. Now in its second year, the Open Gateways Program forms educational partnerships with primary and secondary (K-12) schools to bring the power of network computing to teachers and students, with effective teacher professional development support. Through these competitive grants, which provide Sun™ products and teacher professional development, students and teachers expand their access to curricula and reference materials; teachers can share curriculum ideas and lesson plans electronically; and school districts can centrally manage a network cost effectively and with ease.

"We can't be everywhere, but we knew we could make a difference in schools where Sun volunteers could be involved. With the legacy of NetDay, Sun feels we are extending the idea of 'get wired' to answer the question 'Now what?' Working closely with our partner schools, Sun hopes to help close the Digital Divide and prepare students for the Information Age," said Gary Serda, Manager of Global Community Development of Sun Microsystems and Executive Director of Sun Microsystems Foundation, Inc.

Open Gateways grants are offered in the communities in which Sun has a major presence. These communities include Silicon Valley, California, Broomfield, Colorado, Chelmsford and Middlesex County, Massachusetts, as well as West Lothian Council, Scotland. These schools are selected, in part, to support economically disadvantaged communities. The objectives are to deploy network-computing technologies, assist schools in

utilizing networked-based solutions to deliver effective models of instruction and improve student outcomes, as well as promote the integration of technology into curriculum through teacher professional development.

The focus of these educational partnerships is to prepare students for the world of work in the new economy. Access to current technology and the World Wide Web in addition to StarOffice™ software are the primary applications used to achieve this goal. StarOffice software is a cross-platform office productivity suite available at no charge to users. StarOffice software includes word processing, spreadsheet, drawing, database, presentation, and scheduling programs. With StarOffice software, users have the ability to access files and applications across multiple platforms. (For more information, go to www.sun.com/staroffice.)

The technology from Sun includes a Sun Enterprise™ 250 server with two 400 MHz processors and two gigabytes of memory to run the 30 Sun Ray™ appliances, which access StarOffice software and the Web through Netscape Software Navigator™.

The Sun Ray appliance is a simple, low-cost networked device. Unlike personal computers that require an operating system and applications running locally on the desktop, the Sun Ray appliance is a 'zero-state' device, which allows for quick access to existing applications and resources on the network, and carries a five-year warranty. It's an affordable solution for school administrators who want to give students easy access to the Internet and desktop applications, but need to keep configuration and maintenance tasks to a minimum.



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The Open Gateways ‘train the trainer’ Professional Development Curriculum was developed so that volunteers could train teachers to integrate the StarOffice suite of productivity tools into their school curricula. Module 1 is intended exclusively for trainers and provides an overview of the program, tips for working with adult learners, and step-by-step instructions for organizing and delivering subsequent training modules.

Each subsequent module contains on-line resources designed to help the trainer develop an understanding of the content and gain confidence in the design and delivery of workshops. The resources include: a training guide for each module with step-by-step instructions, presentation slides and scripts for the trainer to use, guided practices for workshop participants to practice, and sample student projects and lesson plans developed and implemented in classrooms by teachers who have completed the Open Gateways Professional Development Program.

As part of the grant, Sun provided an educational consultant to work one-on-one with a team of four teachers to become technology mentors, in each school. Working as a team, they developed lesson plans, implemented them, and received feedback from the consultant. Ultimately, these technology mentors become peer coaches for the rest of the staff.

In addition to the educational consultant, volunteers from Sun helped train all the classroom teachers with StarOffice software. System administration training for the school’s technology coordinators was provided at Sun Educational Training Centers, or through classes.

Linlithgow Academy

Linlithgow Academy is situated in picturesque Linlithgow, Scotland. As one of Scotland’s Royal and Ancient Burghs, Linlithgow is located on the Union Canal, approximately 29 kilometers (18 miles) west of Edinburgh. The Academy itself has been educating students for more than

100 years. Offering classes for students in grades 7 through 12, Linlithgow Academy currently has 1200 students enrolled.

With the help of Sun’s Open Gateways Program, Linlithgow Academy has added a computer lab to its campus equipped with Sun Ray appliances and StarOffice software.

As part of the Open Gateways Program, Sun helps the schools integrate technology into the curriculum. “The professional development or teacher training and mentoring program seem to be working well for us so far. We have had two workshops for 30 staff,” says John Low, rector at Linlithgow Academy.

All the students have access to the Sun lab through various school assignments. Grade seven students use StarOffice software an hour per week. Recently, the seventh grade students created personal Web pages using HTML editor and Imaging in the StarOffice Product Suite.

“Without Sun’s cooperation we would not have a computer lab today. I anticipate that more of our students will quickly be able to achieve IT skills as they should be able to access StarOffice on a wider access in school and at home,” says Low.

Payne Elementary

Located in the middle of the bustling Silicon Valley, Payne Elementary is one of the seven elementary schools in the Moreland School District. With more than 400 students (50 percent of which are of minority decent), Payne Elementary offers classes from Kindergarten through fifth grade. Not all of Silicon Valley is as fortunate as the media would have us believe, Payne Elementary has more than 20 percent of its students who qualify for free and reduced lunch program.

Payne Elementary recently implemented a Sun lab to its school. With the help of Sun’s Open Gateways Program, first through fifth grade students have access to Sun Ray appliances with StarOffice software. Each class is held in the lab once a week for 50 minutes.

In order for students to use the new equipment in meaningful ways, teachers must learn to be comfortable with the computers and software themselves. "Training the tech mentors is extremely helpful. They are then able to model ways to incorporate using the technology in their classrooms, and they can assist their peers who are just learning," explains Ms. Honey Berg, Payne Elementary school principal.

Students are assigned a variety of projects using StarOffice software. For example, the fifth grade students are required to do a Rite of Passage Experiences (ROPE) project. Using StarOffice software on the Sun Ray appliances, students prepare their presentations using StarOffice's presentation application.

"Sun has been extremely supportive and helpful. We are thrilled to have developed this relationship with them. Their support is allowing us to move to the next level of technology integration," says Ms. Berg.

Brooktree Elementary

With a diverse population of 56 percent English language learners and 26 percent qualified for free or reduced lunch program, Berryessa Union School District is

located in San Jose, California. As part of the Berryessa Union School District, Brooktree Elementary offers Kindergarten through fifth grade classes to more than 575 students.

Sun's Open Gateways Program recently helped Brooktree set up a Sun lab complete with Sun Ray appliances and StarOffice software. The lab is located off of the school's library and is being used on a project-based model.

To help Brooktree with its new Sun lab, many teachers were involved in the teacher training and tech mentoring models set up through Sun's Open Gateways Program. "The tech mentoring program motivates teachers to get involved in the computers and integrate their use into the classroom. We get a lot of support for the lesson plans and to get the kids through every step of the whole process. It helped us (the teachers) gain confidence in using the system, as we were also just learning," says Christie Johnson, first grade teacher at Brooktree Elementary and tech mentor.

Many of the students at Brooktree are using StarOffice software, even the kindergartners. A recent project for the first grade students was to write and illustrate



poems using StarOffice. The students first wrote the poems in class and then went to the Sun lab and used the text boxes and drawing tools in StarOffice. “This was a good project for these young students to get the exposure to the computers. They learn to log in, log off, and use the keyboards,” explains Johnson.

“Working with Sun has allowed us to use technology more often with our students. We are able to get a whole class in the lab with each child having their own desktop. Our students love going to the lab and using what they have learned about computers. We are allowing our youngest students at the school to use the lab, which is exposing them to computers at an early age,” states Johnson.

Hillsdale Year Round School

Located in East San Jose, California, Hillsdale Year Round School offers classes to students from Kindergarten through sixth grade. As a four-track year-round elementary school, students and staff are on a sixty/twenty day calendar. Two of the tracks—Kindergarten through third grade classes—are Spanish Bilingual.

Hillsdale’s student population is extremely diverse. Of the more than 750 student population, more than 50 percent are Hispanic. With a large limited English speaking population, most of the students speak Spanish and Vietnamese. Other languages spoken at Hillsdale are Mandarin, Cantonese, Tagalog, Gujarati, Cambodian, Amharic, Punjabi, and Hungarian.

With the help of Sun’s Open Gateways Program, Hillsdale has recently added a computer lab equipped with Sun Ray appliances and StarOffice software. The lab is open to all students; however, the fourth through sixth grade students are using the lab more frequently. Fourth grade students were recently assigned to research California Missions they created prototypes of missions, and prepared reports. By using StarOffice software, students were able to go beyond traditional textbooks and gain a deeper understanding of their project.

Also, the Sun lab enabled students with different learning modalities to participate in collaborative, cooperative study teams.

Through Sun’s professional development program, Hillsdale is able to integrate this new technology into the classroom. “This is a year-round school and it is important to select tech mentors who have various teaching styles so more experienced teachers (tech mentors) can be available to assist/coach other teachers. In addition, with our large ethnic student population it is also important to select tech mentors who are diverse and who have experience teaching multi-cultural and multi-lingual students” explains tech mentor and teacher, Ms. Nelson.

Sun’s Open Gateways Program has helped Hillsdale become involved in the business community and provide access to network computing for students and teachers, as well as help close the digital divide.

“My students feel special because I tell them they are; and, when they go to the Sun lab they are very proud that they are using the latest technology. I want my students (grades 5 and 6) to gain skills and a sense of responsibility and perhaps serve as tech mentors to younger students,” says Ms. Nelson.

Mountain View Elementary

As a suburb of Denver, Colorado, Broomfield is home to one of Sun Microsystems’ Educational campuses and the Mountain View Elementary School. In the Adams County District 12 Five Star School District, Mountain View Elementary has a population of 700 students from Kindergarten through fifth grade. Mountain View Elementary also serves as a special education center school.

Through Sun’s Open Gateways Program, Mountain View Elementary now has its own Sun lab with Sun Ray appliances and StarOffice software. Students have access to the lab several times a week to complete their assignments. The Kindergarten students are learning to get familiar with

the keyboards, whereas all other students are using StarOffice for various school assignments.

“One example of the way our students are using StarOffice in the Sun lab is a fifth grade class was recently researching U.S. Geography,” explains Steve Gandy, Mountain View’s technology coordinator. “Students were broken up into teams and each team was assigned a state to research. By researching through Web sites and on-line encyclopedias, each team put together a tri-fold brochure highlighting certain aspects of the state’s geography—its agricultural use, tourism attraction, etc. The students not only learned about geography, but how to put together a brochure, including graphics downloaded off of the Internet and integrating text.”

“The teacher training and tech mentoring program has worked well for Mountain View school as we can’t be dependent on our technology coordinator, and by having these four teachers trained it has helped a lot when other teachers need help. In addition, these teachers can be models for their peers,” says Pat Brown, principal at Mountain View Elementary.

Since the implementation of the Sun lab, Mountain View students’ access to the Internet has doubled. Previously, students had 45 minutes a week plus some access to the one computer in the classroom. Now the students have up to two hours or more, depending on their grade level.

“The implementation of the Sun lab is also a positive public relations tool because we are partnered with business (Sun). The community loves to see businesses give time, money, and effort to increase productivity in our schools. It’s a real plus for Sun and for Mountain View Elementary—it’s a drive to make schools better,” adds Brown.

Chelmsford High School

Located in Chelmsford, Massachusetts, Chelmsford High School has more than 1600 students in grades 9 through 12.

In order to create the support students enjoy in a small school setting, Chelmsford High School is divided into three houses. Each house has a Dean, a team of two guidance counselors, a secretary, and house support staff members to monitor each student’s academic progress and social growth. The Dean, guidance counselors, and secretarial staff become well acquainted with students during their four years at CHS.

With the help of Sun’s Open Gateways Program, Chelmsford High recently added several Sun Ray appliances with StarOffice software to its computer lab. Located in the school library, the computer lab is a place for students to enhance their learning.

All students at Chelmsford have access to StarOffice software. “There are four teachers that are tech mentors that have been using StarOffice with their classes extensively, from English and Social Studies to Foreign Language and Science,” says Steve Meidel, principal of Chelmsford High School.

A recent use of StarOffice software is in the Spanish language class. The teacher has set up a cooperative project with other schools in various locations—California and Mexico. Using StarOffice software, the students produce books for primary level students with stories and pictures in Spanish. The stories will then be e-mailed to the cooperating school and students can download the stories off of the Internet.

“The whole mentoring Program was very positive. It gives teachers someone to work with that can show them how to incorporate the technology into our classrooms as well as providing the teachers with confidence,” says Meidel.

“Sun’s Open Gateways program has exposed the students to a different platform, which helps train students for tomorrow’s technology,” concludes Meidel.

Conclusion

Sun believes that technology, when aligned with curricula and used to deliver effective models of instruction, can be a powerful tool for learning that creates richer learning experiences for students, improves student achievement, and prepares students for the world of work in the new economy.

Helping to create the schools of the 21st century is about more than just money and equipment. It's about developing new models of instruction, developing educational content, and providing tools to deliver them to students.

"We're providing evidence that a low-cost enterprise appliance can come into schools, with free applications (StarOffice) that fundamentally change the effectiveness of teaching with technology today."

Gary Serda, manager of Global Community Development of Sun Microsystems and executive director of Sun Microsystems Foundation, Inc.

"The Open Gateways Program is meeting several goals: developing replicable models for effective and cost-sensitive instructional technology in classrooms, placing Sun and Sun volunteers in communities where Sun employs workers of all types—allowing us to be more involved in those communities—and as an effective corporate community member, reaching schools and students where there are economic challenges. We look forward to sharing the lessons and ideas that come from these teachers and students to the general education community, and are very proud of the effort put forth by Open Gateways participants and the corporate team that supports them," says Kim Jones, vice president of Global Education and Research for Sun Microsystems.

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