

Interactive Products Division Numonics Corporation Case Studies

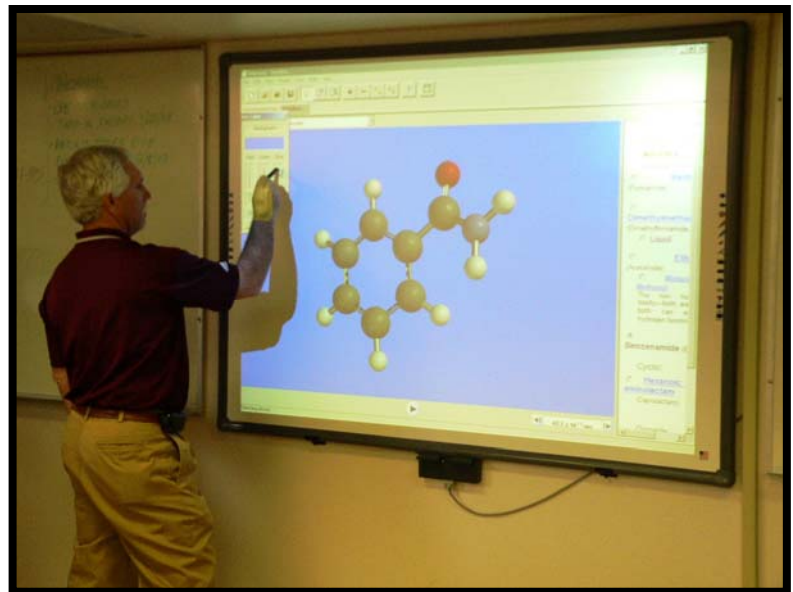


DPA Improves Math and Science at Salpointe Catholic High School

By Susan Brooks-Young

Salpointe Catholic High School is a college preparatory high school located in Tucson, Ariz. Founded in 1950, this coeducational school serves 1,196 students in grades nine through 12. Just over one-quarter of the students receive financial assistance, yet 99 percent of the class of 2007 matriculated to a post-secondary institution. 83 percent of this class took the SAT and 86 percent took the ACT; their average scores on both exams were significantly higher than state and national averages. Many factors contribute to the accomplishments of these pupils, including a holistic approach to education that emphasizes the integration of spiritual, intellectual, moral, physical, psychological and social development. The student body, which represents a variety of ethnic, cultural, religious and socioeconomic backgrounds, is drawn from nine Catholic elementary schools and over 50 other public, private and charter schools.

Guiding and challenging all students to achieve their maximum potential now and in the future are high priorities for the Salpointe faculty. In 2005, Associate Head of School for Curriculum and Instruction Kathy Rother and Director of Development Kay Sullivan were introduced to Numonics interactive whiteboards at the National Catholic Education Association (NCEA) conference. They were intrigued by the possibilities they saw for this technology on the Salpointe campus. With support from the Salpointe Catholic Education

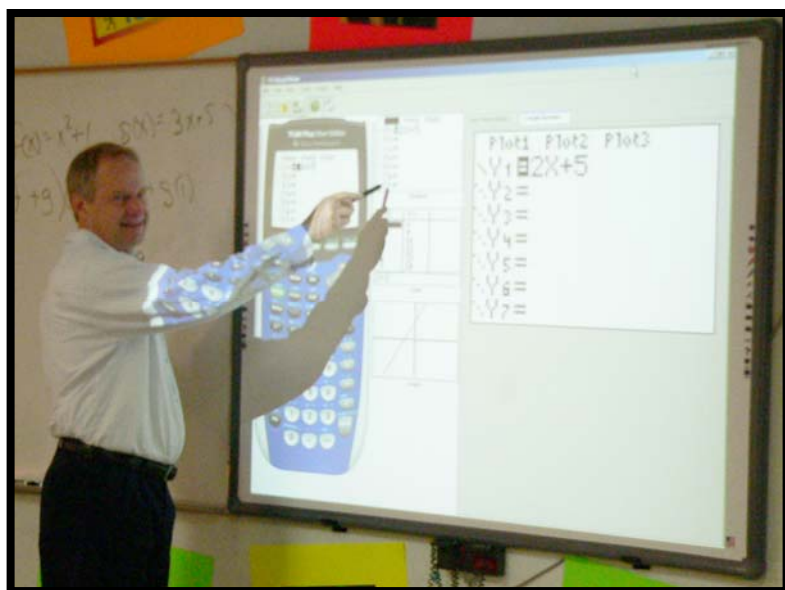


Foundation, the school has purchased and installed more than 40 Digital Presentation Appliances (DPA). Once 10 remaining classrooms are equipped by June 2008, every instructional space on campus will have a DPA interactive whiteboard from Numonics.

Compatible with Windows computers, the DPA offers 62" or 77" screens and 14 predefined Softkeys with dynamic presentation tools and functions. When connected to a computer and data projector, the DPA creates a

large interactive projection screen. Designed for the average Windows user, the DPA makes it possible for teachers to quickly implement interactive presentation techniques without having to devote hours to training and advanced preparation. Board set-up is so easy that instruction can begin within minutes of the time that the DPA is brought into a classroom. And yet, through software upgrades, the DPA remains a cutting edge technology because its capabilities can be expanded as users' skills grow.

Dan Huff teaches Pre-calculus and Geometry and Tim Barry teaches Honors Chemistry, Organic Chemistry and Scientific Research. These veteran teachers have more than 50 years of teaching experience between them, but both still seek out new, innovative strategies for engaging their students. Already early technology adopters, Huff and Barry were among the first Salpointe staff members to volunteer to have a DPA installed in their classroom.



Why were these teachers so eager to integrate the DPA interactive whiteboards? "Mathematics is a visual discipline," explains Huff. "I can tell my students something, but when they can actually see what I'm talking about, they grasp the concept much more quickly." Huff uses his DPA for a variety of purposes, but finds that combining it with Key Curriculum Press' Geometer's Sketchpad in geometry classes and an online graphing calculator in pre-calculus enables his students to really delve into complex concepts, beyond what previous classes had been able to do.

Barry also finds the visual aspects of instruction with the DPA to be extremely important in helping his students better understand principles of chemistry. "Thanks to the DPA, I can show students three-dimensional models of the molecules we're studying and visually demonstrate changes that occur under various conditions." The software Barry uses for these activities is Odyssey "Matter in Motion" by Wavelength, which compliments the DPA product nicely.

Both teachers are finding that their use of the DPAs is increasing the amount of time they spend engaged in collaboration with their colleagues. They report regularly sharing ideas for using the interactive whiteboards during instruction during department meetings. They also describe growing cross-departmental articulation as teachers share successes in larger meetings. This informal networking is just one aspect of the technical support received by Salpointe teachers.

Suzi Malisewski joined the Salpointe staff in spring 2007 as the Education Technology Coordinator. Although she was not involved in the original decision to purchase the DPAs, she has taken an active role in making sure that all classrooms are equipped and in assisting teachers in making good use of the interactive whiteboards. “My primary purpose is to support faculty with their use of classroom technology,” explains Malisewski. “In addition to providing training on the Numonics equipment, I model effective instructional techniques by using the DPAs in all the training I do. I know this technology has a tremendous impact on my ability to clearly demonstrate the topic at hand to groups of faculty and staff.”

Impact on teaching:

- Increased use of visual enhancements during lessons.
- Ongoing shift from teacher-based to student-centered instruction.
- More professional collaboration among members of the teaching staff.

Impact on students:

- Greater understanding of abstract concepts in mathematics and science.
- Increased willingness during class to conduct demonstrations or explain concepts to peers.
- More engagement in daily classroom activities.