



Case Study: Technology Integration in Canyon Ridge School, Dysart Unified School District

The selection and integration of K-12 classroom technologies can be a daunting task, especially when considering the sheer number of available products, and features within those products. Solutions can often go unused when specific expectations and an understanding of the capabilities of the latest technologies are not present, wasting valuable time and resources. However, with a clearly defined plan, schools can effectively integrate technology that compliments curriculum and advances current teaching methods.

This was the case for Dysart Unified School District in Surprise, Arizona. Totalling twenty-one schools and growing, Dysart began developing their technology integration concepts as the need for new schools increased dramatically due to the recent population boom in Surprise. The first step for Dysart was to add a ceiling mounted projector in every classroom within the district, as well as provide a laptop for every teacher. Dysart then decided to increase the focus on technology in their newer schools since the ability to build a technology infrastructure is easier done during initial school construction.

Enter Canyon Ridge School. First opened for the 2007 – 2008 school year, Canyon Ridge is a K-8 concept school, designed specifically to meet the needs of 21st century learners. Dysart defines the Canyon Ridge concept as: "...a comprehensive, integrated curriculum aligned with state standards while emphasizing math and science as focus areas. Technology will be a core component of the instructional program and will be integrated into all subject areas."

The Canyon Ridge concept combines previous research with evaluation of the school needs and budget, however the model and curriculum in place was developed by Dysart Unified specifically for Canyon Ridge and future Dysart concept schools. Jim Dean, Canyon Ridge School Principal explains the belief that technology should be an everyday part of classroom instruction and activities. The school does not even have a computer lab since each classroom is fitted with all technologies that would be available in a lab. Mr. Dean described how today's students are already immersed in technology outside of the classroom, therefore it is important that their learning environment reflect and take advantage of this exposure. This philosophy not only bridges the gap between technology and learning, but also helps drive the overall preparation for global communications and economies. Additionally, Canyon Ridge students are encouraged and expected to use these technologies, rather than simply being a passive recipient of the information they produce. Laurie King, Dysart Unified School District Technology Coordinator echoes this point. In fact, one of the major requirements for implementing technology in Canyon Ridge classrooms is that students must be able to use these products as well. With the technology planning and

implementation complete at the district and school level, Canyon Ridge teachers now have a variety of innovative and interactive technologies to enhance their daily lessons. Melodie Brewer, 5th grade teacher and technology mentor at Canyon Ridge takes full advantage of the technology available to her. According to Mrs. Brewer, "I use my interactive whiteboard and document camera most often because their applications are endless, allowing me to easily incorporate student-centered instruction in the classroom on a daily basis. They both increase student motivation and engagement, while reducing my prep time." Mrs. Brewer goes on to explain that her AVerVision document camera has been essential in increasing student participation and interaction. "Student motivation and engagement has increased tremendously because students want to share their work and ideas using the document camera. They love to be the 'teacher'!"



Mrs. Brewer uses her technology in a wide variety of ways, but some of the most common are to display real documents and objects on a large screen for the entire class to see and manipulate. Among other methods, her document camera is used independently and with other technologies in the following ways:

- Modeling the use of manipulatives for math, language arts and science
- Demonstration of highlighting, finding key words or phrases in reading and to model the writing process (editing revising, etc.)
- Student sharing of journals, writing samples, math solutions with the class
- Demonstration of animal dissections, while capturing photos of different specimens for future reference and comparison
- Capturing images of lessons and demonstrations to post online for absent or struggling students that need re-teaching
- Modeling of other technology pieces (calculators, GPS units, Class Response clickers, MP3 players, etc.)
- Displaying journal/magazine articles for students to read aloud or in groups, rather than making grainy black/white copies or having to order several subscriptions
- Displaying fragile or detailed artifacts for social studies (documents, maps, fossils, etc) to avoid handling damage.

Overall comprehension has significantly improved in Mrs. Brewer's class since authentic material (as opposed to photo copies, textbook pages, or passing around small objects) present real-life examples of lesson content. The use of these technologies has increased students' general quality of work (handwriting, grammar, spelling, etc.) since at any time the work can be displayed and viewed by their peers. Additionally, the use of Student Response System have been essential in tracking immediate improvements, and assessing needs for further discussion and analysis. Ms. King also agrees that student involvement has experienced a noticeable increase at Canyon Ridge, especially when compared to other schools in the district not currently equipped with this level of technology.

The feasibility of adding a document camera to every classroom in the district is currently being determined, and while the concept of Canyon Ridge is still relatively new for Dysart Unified School District, the benefits and successes of this model have been significant. Mr. Dean further explains the Canyon Ridge theory by stating: "Learning is student centered and active, where teachers act as a guide. Students are engaged through hands on learning, inquiry, cooperative learning, and problem solving as they prepare to become successful citizens in the 21st century." Dysart is continuing to assess the benefits of the Canyon Ridge model, and will examine the possibility expanding the concept to other schools in the district, both new and existing.

Additional information:
Dysart Unified School District:
www.dysart.org
Canyon Ridge School:
www.dysart.org/canyonridge
Melodie Brewer, Teacher Technology Resources:
<http://melodie.brewer.googlepages.com>
<http://brewersclass.googlepages.com>
AVerMedia Classroom Presentation Products:
www.avermedia-usa.com/presentation

