



Davidson Mathematics and Science Center Shaping Nevada's Future

Story by Ken Kempcke

Chances are today's college students are familiar with the award-winning children's software series *Math Blaster™* and *Reading Blaster™* and the characters Blaster-naut, Galactic Commander and Dr. Dabble. What students may not know is that Incline Village residents Bob and Jan Davidson developed these revolutionary educational computer games and that the Davidsons are now engaged in a pioneering partnership with the University of Nevada, Reno to improve educational opportunities and academic facilities on the northern Nevada campus.

The Davidsons' ties to the University are born of their lifelong devotion to teaching and learning. The educational entrepreneurs' commitment to the construction of a new math and science center on campus and to serving our nation's profoundly gifted students in the Davidson Academy of Nevada grew from their passionate belief that each

person has a responsibility to make a positive contribution to society.

In 2005, the Davidsons pledged \$11 million for construction of the Davidson Mathematics and Science Center. The \$50 million center will be the first new capital project for the natural sciences on the Nevada campus since 1972, and will become the new hub for the College of Science. Groundbreaking for the center, which will be located in the southeast portion of campus, is scheduled to take place this spring and the building will be available for student and faculty use in fall 2010.

Gabriel Matute, biology and nutritional sciences senior, as well as student government senator, is thrilled about the project: "I'm excited that construction of the Davidson Math and Science Center will begin and I can't wait until it opens! It sends a clear message that I attend a university that makes student enrichment a top priority."

In addition to the gift toward the new

math and science facility, the Davidsons have supplied \$5 million to renovate the former Jot Travis Student Union into a new home for an institution they founded in partnership with the University, The Davidson Academy of Nevada. The Academy—one of a handful of free public schools for highly gifted middle and high school students in the nation—has been touted by *Time* magazine as "a new model for gifted education." (See story on page 15.)

"Jan and Bob Davidson exemplify the entrepreneurial spirit," University President Milton Glick says. "They successfully developed a major business in the emerging field of educational software. Their success has inspired them to give back to society. We are delighted they have chosen to invest in The Davidson Math and Science Center and to partner with us in the Davidson Academy of Nevada for the profoundly gifted. Their generosity and commitment to education is extraordinary. We are fortunate to work with the Davidsons



“Education is the most powerful weapon, which you can use to change the world.”

– Nelson Mandela

in creating the next generation of scientists, mathematicians and engineers, who are so important to the continued strength and well-being of our nation.”

Educational innovators

Jan Davidson’s interest in educational applications for computers began in the late 1970s when she was working as a teacher in Los Angeles. Her three young children were enthralled by computer games and, early in the era of educational computing technology, Jan realized the computer’s potential as a learning tool for her students. She searched for software that combined learning and games, but found none. Determined to help her students enhance their learning with engaging computer programs, she worked with a programmer to design some simple educational games.

Her students’ responses to these very early

computer learning games were so enthusiastic that many parents and teachers wanted to purchase the products. So in 1982, Jan founded the educational software publishing firm, Davidson & Associates, Inc. Thus began Jan’s term as president of the company, providing leadership and vision for hundreds of successful products. By the late 1980s, Davidson & Associates had grown tremendously with revenues of almost \$8 million. Needing an experienced CEO to manage the company, Jan concluded that her husband, who was then executive vice president of the worldwide engineering and construction company, Parsons Corporation, was the best candidate. In 1989, Bob Davidson became chairman and CEO of Davidson & Associates.

During the next few years, Davidson & Associates formed partnerships with toy company Fisher-Price and book publisher Simon & Schuster, among others, and made several strategic acquisitions

including Blizzard Entertainment, a small entertainment software developer whose products Warcraft™, Starcraft™ and Diablo™ became runaway best sellers.

In 1993, Davidson & Associates went public and grew into a multi-hundred-million dollar corporation, recognized by *Business Week*, *Fortune* and *Forbes* as one of the best small-growth companies in the world. In 1996, the company was purchased by a New York Stock Exchange company.

After selling their company, Bob and Jan decided to focus on philanthropic endeavors in their lifelong passion for helping young people become successful learners. While researching ways to make a positive difference, they realized that our nation’s brightest students are one of the most underserved and neglected student populations in America’s educational system.

In 1999, the couple founded the Davidson Institute for Talent Development, a Reno-



In addition to its main focus of driving math and science research, innovation and education, a major goal of the Davidson Center is to foster and continue outreach and educational activities at the University of Nevada, Reno, helping to attract top scholars.

The Davidson Mathematics and Science Center will:

- Serve 80 percent of all University undergraduate students annually enrolling in courses offered by the College of Science to meet core curriculum requirements;
- Replace overcrowded teaching laboratories and provide classroom space for an additional 6,000 students per semester;
- Provide the College of Science with the teaching and research facilities—especially laboratories for the natural sciences—to serve a growing undergraduate student population. Since the creation of the College of Science in 2003, there has been a 25 percent increase in the number of students declaring majors in the sciences and mathematics;
- Be the flagship facility for the College of Science, creating a powerful and integrated identity allowing for improved cross-disciplinary science and math education and student-focused learning;
- Help attract the best science and mathematics students locally, nationally and globally, as well as prominent researchers and scholars;
- Demonstrate the University's commitment to maintaining its national status as a top-level science and mathematics research institution.

based, national nonprofit foundation whose mission is to recognize, nurture and support profoundly intelligent young people, and to provide opportunities for them to develop their talents.

Education is prevalent in most aspects of the Davidsons' professional lives, from the book they wrote in 2004, *Genius Denied: How to Stop Wasting Our Brightest Young Minds*, to their own educations. Throughout their lives, Bob and Jan have translated their love of learning into their own pursuits of higher education.

Bob has a juris doctorate degree from George Washington University, a master's in business administration from the University of California, Los Angeles and a bachelor's of science in chemical engineering from Purdue University. Jan earned a doctorate in American Studies and a master's in communication from the University of Maryland, as well as a bachelor's of art in education and communication from Purdue University. She has received an honorary doctorate of law from Pepperdine University and an honorary doctorate of education from Purdue University.

It was the beauty of Lake Tahoe that brought the couple to Incline Village, after years of living in metropolitan areas. "We both grew up in rural areas," Bob says. "While we lived in the cities and enjoyed our time there, once we cut our ties with our daily work habits, there was no reason to be there. We wanted to be in a nice, small, beautiful place."

Some of their favorite activities at Lake Tahoe include snow-shoeing, hiking, golfing and especially boating. But it's not just Lake Tahoe's magnificent beauty that appeals to the Davidsons, it's also what Bob calls Nevada's "can-do" attitude. "In Nevada you still have people say yes," Bob says.

Reversing a trend

Today in the United States, there is a pressing need to focus on math and science. American students have been losing ground to other countries in these subjects, which are the foundation for technological innovation and economic leadership. The Davidsons recognize that reversing this trend is vital to America's future prosperity and security.

In addition, the Davidsons understand that increasing enrollment in science courses, the changing way faculty and students engage in the study of science and the evolution of scientific understanding necessitate critical and far-reaching expansion of the University's current science facilities.

Of the University's 16,000 students, three-fourths of them are engaged in mathematics and science classes currently housed in different areas on campus. Under one roof, these disciplines will thrive.

Jeff Thompson, interim dean of the College of Science, says: "The center will address many of the space constraints currently facing the College of Science. In addition, the center will create a powerful and integrated identity for the college, allowing for improved cross-disciplinary science and math education, as well as student-focused learning. The Davidson Center will help attract the best science and mathematics students locally, nationally and globally, in addition to prominent researchers and scholars."

One of the challenges associated with a large and complex academic unit such as the College of Science is physical proximity, as well as providing adequate teaching, classroom and research space. "It's an age-old dilemma," says Thompson, who is not only interim dean, but also a long-time Department of Physics faculty member. "We have so many students, so many faculty, and they are scattered across the campus. That is why our new Davidson Mathematics and Science Center is so critical to our future. It will definitely put the College of Science at an entirely new level."

The 100,000-square-foot building promises to become a hub for student learning, provide a significant enhancement of the University's undergraduate research capabilities, as well as become a centralized location for the College of Science. The center will include 27 modern laboratories, each with the capacity for 20 to 24 students, and four large classrooms, each with the capacity for 75 students.

In addition, there will be wireless Internet access throughout the entire facility, enhanced environmental controls and space for culture preparation in eight biological science laboratories, as well as a 50-seat computational classroom—the largest on campus—to teach students the use of software for data analysis and visualization.

The Davidson Mathematics and Science Center will be built on the site formerly occupied by the Fleischmann Greenhouses, just east of the Paul Laxalt Mineral Research Building. The greenhouses have been replaced by new, state-of-the-art University greenhouses east of campus on Valley Road.

Hershenow & Klippenstein Architects of Reno have been charged with bringing the new building to life. The importance of the new center to the College of Science goes beyond the practical needs of more classroom



Doctoral candidate Jeremy Crowfoot will complete his studies in organic chemistry early this summer. This spring he is interviewing at pharmacy schools across the west. "My education and professors here at the University of Nevada, Reno have prepared me well for the challenges ahead!" he shares.

Facts at a glance

The Davidson Mathematics and Science Center will provide an integrated and centralized 21st century environment for learning and research. Specifically, it will have the following features:

- 100,000-square-foot state-of-the-art teaching and research facility with mathematics and science wings;
- 27 modern laboratories, each with the capacity for 20 to 24 students, and four large classrooms, each with the capacity for 75 students;
- Wireless Internet access throughout the entire facility;
- Enhanced environment controls and space for culture preparation in eight biological science laboratories;
- Increased glass hood space for improved observation and greater control over experiments in the seven general chemistry laboratories;
- Student meeting areas with whiteboards for students and teaching assistants to meet and interact with each other outside classrooms and laboratories;
- Electronic interfaces, information technology platforms, projectors, modern audio visual and presentation equipment, whiteboards and pull-down screens in every laboratory and classroom;
- A 50-seat computational classroom—the largest on campus—to teach students the use of software for data analysis and visualization;
- Space for the dean of the College of Science suite and the Department of Mathematics in the administrative wing of the facility.

Major donors to the Davidson Mathematics and Science Center

Brett or Deborah Barker Foundation
Bretzlaff Foundation, Inc.
Reinhard F. Bruch
Ann M. Carlson '59
Community Foundation
of Western Nevada
The Thomas P. and Thelma
B. Hart Foundation
Robert Z. Hawkins Foundation
Charles and Ruth Hopping
Charitable Foundation

Leonard and Sara M. Lafrance '73
Mallory Foundation
Charles N. Mathewson Foundation
Dale J. '67 and Lala Placey
Jennifer '80 and Phil Satre
Frances C. and William P.
Smallwood Foundation
Jack Van Sickle Foundation
Hilda B. Wunner



Bretzlaff Foundation, Inc. Trustees
Mike Melarkey '72, Dick Gilbert '49
and Dan Morgan



Phil and Jennifer '80 Satre



Leonard and Sara M.
Lafrance '73

and laboratory space for students and office space for faculty. As the flagship facility, it will provide immediate identity to the college and will act as a magnet and marketing tool for recruiting and fund-raising efforts.

Expanding knowledge in Nevada

The Davidsons' interest in supporting math and science education in Nevada is manifested most impressively in their commitment to the construction of the new academic center. The University of Nevada, Reno Foundation was also instrumental in providing funding. The foundation's Board of Trustees helped to raise more than \$3.5 million in challenge gifts for the construction project.

"The foundation was pleased to be able to assist the University in its fund raising to complete the new Davidson Mathematics and Science Center," says Paul Bible '62 (economics), chair of the foundation. "We are deeply grateful to the Davidsons and all of the donors who contributed to the successful campaign to build the new home for the College of Science, which will benefit faculty

and students for generations to come."

The Davidson Mathematics and Science Center enjoyed significant donor support from numerous community partners who believe in the mission of the College of Science. Completion of the new facility would not be possible without the generous contributions of these private donors.

The Reno-based Bretzlaff Foundation is one such community partner that has pledged a major gift to assist with the center's construction. "The Bretzlaff Foundation is excited to be a small part of the Davidson Math and Science Center" says foundation president Mike Melarkey '72 (political science). "Because of the Davidsons' vision, this new facility will address a critical need for classrooms and laboratories for the students of this great University."

Jennifer '80M.Ed. and Phil Satre also gave substantially to the center. Jennifer says of their donation: "Phil and I were pleased to be able to contribute to the Davidson Mathematics and Science Center because we are convinced that a strong and thriving University of Nevada, Reno is vital to the

"The new Davidson Mathematics and Science Center, by consolidating all math and science learning into a state-of-the art facility, will enhance learning, encourage collaboration, stimulate research, and add a new level of prestige and competitive advantage for the University of Nevada, Reno. I am proud to have played a part in making this happen."

– Sara Lafrance '73 (English), who with her husband, Leonard, is a major donor to the Davidson Mathematics and Science Center

quality of life we all cherish. It seemed a 'natural' to support this project, which will allow the University not only to attract outstanding students, but also to attract and maintain top notch faculty in the fields of math and science. This is all part of the University's mission of providing an excellent education, finding solutions to our society's problems, and meeting the changing needs of our state and nation. These are exciting times on campus and we are honored to be able to help." ■



Creating opportunities for today's top young minds

Story by Ken Kempcke. Photos by Jeff Dow.

The Davidson Academy

When educational entrepreneurs Bob and Jan Davidson moved to Nevada, they not only admired the beautiful scenery of the Lake Tahoe area, they were also impressed with the can-do attitude they found in the state. This attitude was vital to their efforts in the Nevada State Legislature in 2005 when the couple sought the state's cooperation in establishing a new kind of public school for profoundly gifted middle and high school students, The Davidson Academy of Nevada.

The Academy is one of the first free, public schools for profoundly intelligent students in the nation. The Academy was established in August 2006 on the University of Nevada, Reno campus. Although the 2005 legislature passed a bill establishing the Academy as a public school, no public financing was provided and the Davidsons covered the entire cost of its first year of operation and capital expense. The 2007 legislature provided funding for the Academy, matching the state funding given for all other public students in Washoe County.

The Davidsons' motivation for establishing the Academy stems from their view that

highly intelligent young people are underserved in most U.S. public schools. "All young people should have access to an education so they can learn and achieve at a level appropriate to their abilities," Jan says. "Profoundly intelligent young people should not be denied what we desire for all young people. Their special needs should be recognized and accommodated. Rather than be locked into an age-based curriculum, profoundly gifted young people should have the opportunity to be challenged to excel and achieve."

Bob adds, "Approximately one and a half million students, or half of all gifted students, in the United States are underachieving because they are not appropriately challenged in school. As a result of being under-challenged, many of our nation's brightest students are either tuning out or dropping out of traditional schools."

Students who apply for admission to the Academy must score in the 99.9th percentile on IQ or college entrance exams. Personalized learning plans are developed for each student and they have access to University courses and professors.

The Academy's inaugural class of 35 students came from cities across the United States and included a student from Australia. Currently, 44 students are attending the Academy, and the Davidsons hope to expand to a class of 200 students in five years. In addition to 10 full-time staff, the Academy receives constant support from the Davidson Institute for Talent Development (a Reno-based, national, nonprofit foundation started by the Davidsons), a family consultant team and parent volunteers. In May, the Academy expects to graduate its first student, Alexandra Morris, 16, of Ventura, Calif.

"Attending The Davidson Academy has given me the opportunity to study on a level advanced enough for me, in the company of other students who have similar needs and abilities," Alexandra says. "I plan to go on to college as a full time student. My major will be some kind of science, probably environmental studies. I'm interested in many different subjects, but my general goal is to do work in science as a career while continuing my exploration of the arts and the humanities on the side."



Davidson Academy students Rachel Ellison, 15, Andy Wei, 15, Alexandra Morris, 16, Cody Nolan, 16, and Kelsey James, 14, demonstrate their considerable brainpower (page 15) by conjugating foreign verbs, creating ciphers and codes, and translating witty sayings into Chinese-Spanish. Above: The young students pose in front of a whiteboard filled with complicated math problems, which they actually understand.

The Academy offers an alternative for students like Alexandra, who aspire to a greater academic challenge than advanced placement classes or the limited number of college-level classes available at high schools. Courses are taught by state-licensed teachers, as well as professors and instructors from the University and Truckee Meadows Community College.

Academy on the move

The Davidsons recently donated \$5 million to renovate portions of the former Jot Travis Student Union building to become the new home for The Davidson Academy, which is currently housed in the KNPB Channel 5 building on the northwest side of campus. Any savings in renovation will be contributed to the new mathematics and science center. The Academy is slated to open its third academic year August 25 on the top floor of the old union.

The old student union will still be named the Jot Travis Building and its Pine Lounge will remain open for University functions after Academy hours. The Overlook restaurant will also remain open as a dining option for the entire University community.

Under the leadership of President Milton Glick, who is also a Davidson Academy board member, the University has welcomed Academy students to campus and offers access to University professors, libraries, classes and other valuable educational resources and opportunities. A dual enrollment agreement

between the Academy and the University allows students to take courses for college credit and encourages them to attend the University after graduation from the Academy.

"I am convinced The Davidson Academy of Nevada will be an exemplar for the nation's public and private colleges and universities. We are both humbled and energized to be part of this historic educational undertaking," Glick says.

The Davidsons decided to open the Academy on the University campus because of the quality and enthusiasm of the University's faculty, as well as the campus' willingness to support a long-term partnership. "The Davidson Academy, like the University, is

committed to continuous improvement," says Academy Director Colleen Harsin '98M.A. (psychology), '01MSW (social work). "All the students, faculty and staff at the Academy are tremendously excited to move into the

new facility this fall and see this move as an opportunity to share and grow with the University of Nevada, Reno community."

"I am convinced The Davidson Academy of Nevada will be an exemplar for the nation's public and private colleges and universities. We are both humbled and energized to be part of this historic educational undertaking"

— President Milton Glick

One important indicator of the strength of the Academy-University partnership is the number of University alumni employed by the Academy. Out of 10 full-time Davidson Academy employees, five are University graduates. Additionally, 12 of 21 full-time employees at the Davidson Institute for Talent Development are University alumni.

The students currently attending The Davidson Academy of Nevada are already having a positive impact on campus. "University professors tell us that our students enrich their classrooms even though they are younger and many times it is an

Academy student who does the best in the class," Jan says. "Such individualized education available in University courses will make school more humane for all students and, particularly in the case of gifted students, will



Photo by David Calvert



Photo by Theresa Danna-Douglas

reap rewards for society for years to come.”

Bob says: “We hope to graduate up to 50 students a year from the Academy. We’re hoping that many will go on to attend the University of Nevada, Reno because they have roots here with their families. If that is the case, the University of Nevada, Reno will, to the best of our estimation, have more profoundly gifted—not gifted or highly gifted—students than any university in the country. I think it really is a great University and I think it has a chance to be one of the premier universities—where it deserves to be.

“We believe that supporting profoundly gifted students also supports our future. Our nation needs talented individuals to compete in the global economy and to continue to provide our citizens the quality of life they currently enjoy. The United States is already being seriously challenged by India and China in math, science and technology. If schools like The Davidson Academy provide an appropriately challenging education to bright students instead of denying them the opportunity to learn, we will build the talent pool of high-achieving, intelligent citizens our nation requires.”

Renovation of the Jot Travis Building in preparation for the Academy’s fall opening began in January. The new home of The Davidson Academy will provide approximately 25,000 square feet of space for new classroom and administrative offices. In comparison, the Academy now only occupies 6,000 square feet in the KNPB Building. [N](#)

Top left: Davidson Academy student Misha Raffiee, 13, during a lab inside the chemistry building. The students were performing an experiment to find the molar mass of a vapor. Top right: THINK Summer Institute 2007 students, Stephanie Ku, 16, Emma Schmelzer, 15, and Daniel Leef, 16, study on the University campus. Below: THINK Summer Institute 2007 students, Top row: Zachary Peterson, 15, Marina Mellis, 16, Reed Molbak, 15, and Antonia Carrol, 14. Bottom row: Esther Kim, 16, Shane Wigton, 16, Laura Bergsten, 15, and Adam Sanford, 16.

Why the Davidson Academy is unique:

- The focus is on the individual student, so that each has the opportunity to maximize his or her talents.
- A personalized learning plan is developed to assure each student will be appropriately challenged across all subject areas.
- Students are not placed into classes by age. They are placed into classes that best match their abilities and interest levels.
- In most courses, students may pursue more advanced levels with research options.
- When students are ready to proceed with advanced studies, they may take University of Nevada, Reno courses that are an optimal match for their abilities.
- Academy students report that the social environment of interacting with their intellectual peers significantly enhances their education.



Photo by Theresa Danna-Douglas