

Latino Health and Science Career Connections

A program of SDSA

2007 Medical Academy Tool Kit

The San Diego Science Alliance is a non-profit consortium of leaders from business, K-12 education, higher education and scientific institutions in San Diego County, and is committed to enhancing science literacy in K-12 education. The Science Alliance fulfills its mission by:

- Networking among organizations in the consortium
- Connecting needed resources with K-12 educators
- Initiating, conducting, and supporting K-12 science education programs for San Diego County students and teachers

For questions regarding this toolkit, please contact:
Mickie Beyer, Executive Director, SDSA

619.303.0968
mickiebeyer@cox.net



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Forward

Latino Health and Science Career Connections Project

The Latino Health and Science Career Connections, a project of the San Diego Science Alliance (SDSA), is a collaborative effort between healthcare and education organizations to encourage Latino students to study science and health in high school, specifically at high school health academies. The purpose of the project is to prepare Latinos in high school to pursue health careers or study health or science in their higher education. The goals of the project are to provide resources and recommendations to existing and future health academies that can be utilized to engage Latino students to pursue health careers.

SDSA, located in San Diego, California, is a non-profit consortium of education and industry leaders with the purpose of increasing science literacy in K-12 education. SDSA accomplishes its mission by providing networking among interested organizations, linking teachers and educators with relevant science resources, and providing K-12 science education programs to students and educators. Some of the web based resources offered by SDSA include:

- Online Announcement System (provides information about science learning opportunities for students and professional development opportunities for teachers. The announcement system is routinely accessed by over 3000 individuals)
- Online Resource Catalog (listing of over 300 organizations in San Diego; teachers can select from a broad range of resource programs in subjects relating to science and technology)

With funding from The California Endowment, the San Diego Science Alliance (SDSA) set out to document the needs, resources, and untapped potential of health/medical academies in San Diego County. In particular, SDSA sought to better understand the barriers and conditions that contribute to Latino participation and success in high school health/medical academies. As part of the SDSA-sponsored Latino Health and Science Career Connections, a report was prepared highlighting the findings from focus groups, stakeholder interviews, and primary research efforts conducted during the winter and spring of 2007. In addition to conversations with high school students, parents, teachers, and counselors, the project team gathered insights and promising strategies from industry and higher education experts. A final report including key recommendations was prepared and published in May 2007. Copies of this report may be obtained by contacting Mickie Beyer, Executive Director, SDSA, mickiebeyer@cox.net

Latino Health and Science Career Connections Tool Kit: Commentary

In addition to the preparation of the Latino Health and Science Career Connections report, SDSA prepared this tool kit. The tool kit presents information about programs and resources and also includes some flyers and forms for use within the medical academy/pathway setting.

Programs and Resources Included: The programs and resources included in this toolkit are intended to be used by educators, students, parents, and industry to identify potential programs or resources that could help implement their goals. Among the programs profiled here, a few have produced some outcome data. However, few have undergone rigorous scientific testing of the programs, so outcomes may vary when the programs are replicated. Generally, further research is needed on health academy outcomes and specifically the outcomes of programs directed towards Latino students. While most of these programs lack outcomes data, it is important to recognize that the experiences of other organizations can provide useful examples. The sites and resources provide guideposts for developing or enhancing health academy programs. In compiling the programs and resources sited in this tool kit a literature search was conducted using on-line databases Academic Search Elite, PubMed, and ERIC, and a general website search was done using search engines Yahoo and Google. Information came from journal articles, books, reports, and specific program websites.

Primary sources were also utilized, including interviews with California and San Diego education and industry stakeholders, as well as focus groups with teachers, parents, and students of San Diego high schools. Although a literature search and on-line search were done to identify practices that could be used by health academies to attract, engage, and retain Latino students, it was not possible to identify every possible practice or resource.

Flyers and Forms: The forms and flyers listed in this toolkit are an initial and incomplete compilation of materials and resources needed to support medical academies. Since every school site has different needs and school district regulations and requirements these forms and flyers will not universally apply to all existing or developing medical academy programs. They are included as samples only. These materials are not endorsed by SDSA but are included as examples that may be customized and revised by schools to meet their individual needs. One of the recommendations Included in the Latino Health and Science Career Connections Report is to develop a Web-Based Resource Directory. This San Diego-specific resource guide would provide information (in English and Spanish) for Latino parents, Latino students, educators, and counselors. Ideally, this web-directory could build on existing sites such as the SDSA site. Additionally in the Latino Health and Science Career Connections focus groups teachers noted that it would be valuable to have examples of forms and materials that schools could easily access and customize for their school. ***This tool kit is offered as a partial solution and a first step in the development of this web based guide.***

Acknowledgements

SDSA gratefully acknowledges the guidance and participation of Debbie Foley, Oceanside High Health Academy, Dee Joyner, Southwest High School, Health Career Plus Academy and Jessica Wright, Mt Miguel High School, Academy of Medical and Health Sciences in initially identifying needed materials and sharing their examples and sample forms and flyers which are included in this tool kit.

San Diego Medical Academy Directory

The matrix on the following 5 pages outlines basic information, including program contacts, for high school medical academies (existing or in development) in San Diego.

San Diego County High School Health Pathway/Academy Contact List

Prepared May 2007 by the staff of San Diego Science Alliance

Name of High School/District	Program Name	Year Started & # of Students	Contact	% Latino	Pathway to Middle Schools	Industry/Education Partners	Articulated with College(s)	Funding Sources
Grossmont, Grossmont UHSD	Health and Medical Academy	2002 120	Judd Hulbert 1100 Murray Drive La Mesa, CA 91944 jhulbert@guhsd.net	Not Known	No	Grossmont College, Cuyamaca College; Sharp Grossmont and other hospitals; Workforce Partnership	Working on articulating Human Physiology w/Grossmont & Cuyamaca colleges	ROP; Grossmont Healthcare District
Helix, Grossmont UHSD	Human Health	2007 55	Bart Hays 7324 University Ave. La Mesa, CA 91941 bhays@helixcharter.net	33%	In development with Lemon Grove M.S. (Encourage/assist in dev. of after-school healthcare enrichment pgm)	Grossmont Healthcare Advisory Board; Sharp Grossmont Hospital; Kaiser; Grossmont Community College; Cuyamaca College	In process (Medical Biology) at Cuyamaca College	Grossmont Healthcare District
Mt. Miguel, Grossmont UHSD	Academy of Medical and Health Sciences	2006 61	Jessica Wright 8585 Blossom Lane Spring Valley, CA 91917 jewright@guhsd.net	41%	Limited to introduction to academy; recruitment	Scripps Mercy & CV; GUHSD Healthcare Board; Sharp; Kaiser; USD School of Medicine; Southwestern School of Nursing; San Miguel Fire Dept.; SD Homecare Medical Supplies	Not Yet	SSP; CA Endowment; Grossmont Healthcare District
West Hills, Grossmont UHSD	Health Pathway	2003 120 – 200	Rhian Purdy 8756 Mast Blvd Santee, CA 92071 rpurdy@guhsd.net	Appx 15%	No	Kaiser, Sharp Grossmont, Alvarado, Santee Fire Dept.	In process with Cuyamaca College	Grossmont Healthcare District

Name of High School/District	Program Name	Year Started & # of Students	Contact	% Latino	Pathway to Middle Schools	Industry/Education Partners	Articulated with College(s)	Funding Sources
Crawford, San Diego USD	School of Community Health & Medical Practices	2004 177	Kris Hurst 4191 Colts Way San Diego, CA 92115 khurst@sandi.net	Appx. 75%	Limited; pathway info shared w/feeder school (Mann) during articulation	Sharp, UCSD, Public Health Dept., Lemon Grove Care and Rehab facility.	Healthcare Essentials articulated with Grossmont College	RAHSI; Mediversity via Sharp; ROP (Perkins Grant)
Castle Park, Sweetwater UHSD	Health Science Career Pathway	2004 69	Maria Shull 1395 Hilltop Drive Chula Vista, CA 91911 maria.shull@suhsd.k12.ca.us	Appx 98%	No	Scripps Mercy Chula Vista	Not available	RAHSI; CTE; ROP
Southwest, Sweetwater UHSD	Health Career Plus Academy	2001 135	Dee Joyner 1685 Hollister Street San Diego, CA 92154 Cardelia/dee.joyner@suhsd.k12.ca.us	Appx. 95%	No	Scripps (Camp Scripps)	Yes; Southwestern	SSP; CTE (Career Tech Education); RAHSI; ROP
Sweetwater, Sweetwater UHSD	ROP Health Careers Pathway	2001 155	Esther Diaz 2900 Highland Avenue National City, CA 91950 Esther.diaz@suhsd.k12.ca.us	Appx. 60%-70%	Not yet. Several grants want connection to MS; also HS students to mentor MS students. (Granger & National MS)	Paradise Valley Hospital, Scripps Mercy Hospital Chula Vista. (9--week Internship/mentoring pgm; Camp Scripps)	Yes; Southwestern	Secondary and ROP Perkins Career Technical Education, SB70 grants, RAHSI
Mission Hills, San Marcos USD	Hlthcare Career Academy	2005 196	Len Judd 1 Mission Hills Court San Marcos, CA 92069 len.judd@smusd.org	41%	Will by summer 2007	Palomar Pomerado Health (Red Shirt Pgm); Community Outreach for Prevention Education; Vista Community Clinics	Yes - Palomar College (HC Fundamentals I & II: CSUSM (Biochem)	PPH Foundation; GO-MED via PPH / Kiwanis; San Marcos Community Foundation; RAHSI; ROP

Name of High School/District	Program Name	Year Started & # of Students	Contact	% Latino	Pathway to Middle Schools	Industry/Education Partners	Articulated with College(s)	Funding Sources
Oceanside, Oceanside USD	Health Careers Academy	2001 140	Debbie Foley One Pirates Cove Oceanside, CA 92054 debbie.foley@oside.k12.ca.us	72%	No	Local Clinics, Camp Pendleton, Oceanside Fire Dept, Palomar Pomerado, Tri-City Medical Ctr, Humane Society	Yes; Palomar & Mira Costa Colleges	CA Partnership Academy; RAHSI; ROP
Ramona, Ramona USD	Hlthcare Careers Pathway Program	2006 180	Mike Gallion 720 Ninth Street Ramona, CA 92065 mgallion@Ramonausd.net	20%	No	Palomar Pomerado (Red Shirt Pgm); various clinics	No; plan to w/Palomar in future	PPH Foundation; RAHSI

San Diego County High School Health Pathway/Academy Contact List Medical Academies / Health Pathways Under Development

Name of High School/District	Program Name	Year Started & # of Students	Contact	% Latino	Pathway to Middle Schools	Industry/Education Partners	Articulated with College(s)	Funding Sources
Granite Hills Grossmont UHSD	Health, Science, and Medical Technology	Will begin 2007-08 Expect 60	Boyd Stewart Rick White 1719 East Madison Avenue El Cajon, CA 92019 bstewart@guhsd.net rwhite@guhsd.net	N/A	No	Currently seeking Industry partners Education partners - Grossmont/Cuyamaca College; UCSD	Not Currently	Tech Prep; Carl Perkins
Health Sciences High School and Middle College	NA – Entire school has health science focus	Charter Planning – 2006 Will open Fall 2007 Goal 175 - 250	Ian Pumpian, CEO Emily Shell, Principal 7380 Parkway Drive La Mesa, CA 919141 ian.pumpian@sdsu.edu	N/A	No, but outreach is provided for info about school.	Sharp Healthcare; Coleman College; City College; SDSU (informal)	San Diego City College; in process with others.	Charter – 90% \$ via average daily attendance; CA Charter School Start-Up Grant via Walton Family funds; CA Health Science Capacity Grant
Orange Glen Escondido UHSD	Health Careers Academy	Fall 2007 Expect 65	Diego Ochoa, Principal 2200 Glenridge Road Escondido, CA 92027 dochoa@euhsd.k12.ca.us	Appx. 75%	Plan to pursue in year 3 or 4 of implementation.	PPH	No	Currently via District funding only. Hope to pursue grants.
San Diego High	Not Yet Named	Hope to begin Fall 07	Dianne Cordero Mary Bostwick Denise Magno 1405 Park Blvd San Diego CA 92101 dcordero@sandi.net	Appx. 75% in School	Plan to have in place ASAP	Currently seeking Industry & Education partners for new program	Not Yet	N/A – In Process

Name of High School/District	Program Name	Year Started & # of Students	Contact	% Latino	Pathway to Middle Schools	Industry/Education Partners	Articulated with College(s)	Funding Sources
San Marcos High San Marcos USD	Health Academy	Fall 2007 Expect 105	Donna Hess 1615 W. San Marcos Blvd., San Marcos, CA 92078 donna.hess@smusd.org	Unknown at this time	No	CSUSM, Palomar College	Palomar – Med Terminology	PPH Foundation; GO-MED via PPH / Kiwanis; San Marcos Community Foundation; RAHSI; ROP
San Ysidro Sweetwater UHSD	Medical Pathway	July 2007 60	Sheila Krotz 5353 Airway Road San Diego, CA 92154 sheila.krotz@suhsd.k12.ca.us	99%	No	In Process with Scripps Chula Vista & Southwestern College	In process – Southwestern College	RAHSI
Valley Center, Valley Center USD	Health Careers Pathway	2006 planning; will start in 2007 Hoping for 90	Vicki Montgomery 31322 Cole Grade Road, Valley Center, CA 92082 Montgomery.vi@vcpusd.net	N/A	N/A	PPH; Neighborhood Health; Indian Health Council	Will be with Palomar College	PPH Foundation; CA Health Science Capacity Building Grant (submitted); RAHSI
Vista, Vista USD	Not Named Yet	Fall 2007	Richard Crane 1 Panther Way Vista, CA 92084 rcrane@vusd.k12.ca.us	Appx. 75%	Will by fall 2007	Tri-City Hospital; Scripps; Sharp	In process- Palomar College	PPH Foundation; SB70; CA Health Science Capacity Building Grant; RAHSI

Teacher / Counselor Resources

Curriculum Practices

School curriculum is a critical element to a student's success in the classroom. Adapting curriculum to ensure that it accommodates a wide range of learning styles, backgrounds, and interests will help all students to achieve academic success. In addition, providing a rigorous curriculum, coupled with the expectation that students will succeed, has positive outcomes. The following section discusses promising curriculum practices, including programs with recognized curriculum, lesson plans designed in accordance with curriculum standards, and organizations providing a broad range of curriculum resources. It begins with a description of ConnectEd, an organization strongly promoting educational pathways.

ConnectEd: The California Center for College and Career (<http://www.connectedcalifornia.org>)

ConnectED was founded by the James Irvine Foundation to expand the number of educational pathways available to high school students. ConnectEd believes that there needs to be an alternate way of preparing students for post-secondary education and careers, and that the way to do that is through career focused programs of study in high school like an academy, small learning community, or a school centered around one industry. More than 1/3rd of high school students drop out before graduation, and ConnectEd aims to reduce that number while also providing students with meaningful and rigorous curricula. The focus is a high school experience with a rigorous and challenging academic core, challenging technical courses, authentic learning in the workplace through work-based learning activities, services provided to students to ensure they can be successful, and strong partnerships with post-secondary education and industry. ConnectEd is a center for innovation, research, and policy development regarding developing high school curricula that prepares students for higher education and for the workforce. All curricula meets a to g guidelines and connects high school academies with specific industries in order to develop practical skills. Pathways supported by ConnectEd include:

- Business and finance
- Biomedical and health sciences
- Building and environmental design, engineering
- Advanced manufacturing
- Law and government
- Transportation
- Hospitality and tourism
- Communications
- Arts and entertainment
- Education and social services

ConnectEd offers a comprehensive toolkit that highlights how to incorporate Career Technical Education into academic curricula through a pathway model. Sections of the toolkit include: mapping and monitoring curricula, providing professional development, creating and managing CTE at your school, making postsecondary and industry connections, promoting local, state, and federal policy, and using research and state resources. ConnectEd is also developing integrative curriculum units in the biomedical and health sciences in collaboration with The National Consortium on Health Science and Technology Education, MPR Associates, and high schools across the country. These resources can be found on the ConnectEd website. ConnectEd also identifies and briefly describes model pathway programs in the state of California. Two health academies were recognized by ConnectEd as model programs: the Health Professions High School and the Health Careers Academy at Palmdale High School.

East San Gabriel Valley Regional Occupational Program (ROP) and Center

(<http://www.connectedcalifornia.org/story/sangabriel.php>)

East San Gabriel Valley Regional Occupational Program (ROP) and Center was recognized by ConnectEd as a model ROP.¹ The ROP serves students 16 years and older and adults in 7 school districts, with 15 high schools. It is considered a leader in developing rigorous ROP courses that meet UC and CSU system

¹ <http://www.connectedcalifornia.org/story/sangabriel.php>

requirements. Courses are designed around the idea that hands-on learning is best for students' retention of material, and that they should provide students with marketable skills. New courses that are developed take into account current college admission requirements, labor survey results, advisory committee recommendations, and current research on learning. The ROP is considered a model program for integrating rigorous academics with marketable skills for students. As many health academies have ROP courses, this program could serve as a reference for academies in developing and integrating ROP courses into their program.

High Schools That Work (<http://www.sreb.org/programs/hstw/hstwindex.asp>)

High Schools That Work is a school improvement initiative from the Southern Regional Education Board. The curriculum combines college-preparatory mathematics, science, and language arts courses with career/technical courses in grades 9 through 12. Specifically, the program of study included four credits in English courses, three credits in mathematics, including two credits in college-preparatory Algebra I, geometry, Algebra II, and trigonometry, three credits in science, including two credits in college-preparatory biology, chemistry, physics, or applied physics, and at least four credits in an academic or career/technical major. High Schools That Work has been shown to increase the number of students meeting the HSTW achievement goals. HSTW has also identified key practices that have been successful for HSTW that can serve as guidance for school improvement.²

Research sponsored by the **Hispanic Dropout Program (HDP)** identified effective dropout prevention programs and programs that increased college attendance rates.³ Two programs identified as effective dropout prevention programs were **The Coca Cola Valued Youth Program** and **Achievement for Latinos through Academic Success (ALAS)**. The Valued Youth Program is a cross-age tutoring program designed to increase self-esteem and academic success of middle and high school students by having them tutor elementary school students. ALAS was designed for high-risk, Mexican-American middle school students, and focused on interventions in the areas of family, community and school. Outcomes showed that students in both programs had lower dropout rates compared to control students. Programs identified as being effective in increasing the college attendance rates of Latino students included:

1. **Upward Bound** is administered by the U.S. Department of Education and provides students enrolled in the program with extra instruction, information on college opportunities and career options. Students also participate in a 6-week summer academic program on a college campus.
2. **SCORE** is a program designed to prevent drop-out and increase college attendance. It focuses on students unlikely to go to college as identified by teachers and provides professional career counseling, tutoring, a parent program, motivation training and a summer program.
3. **AVID (Advancement Via Individual Determination)** began in San Diego County, California and took students with good academic potential and enrolled them in rigorous college prep classes and provided tutoring. Project AVID is an in-school academic support program that prepares students in grades 5-12 to attend college. It is targeted towards students in the academic middle, but is open to all students. AVID helps prepare under-privileged students to attend college and has been implemented in schools in 39 states and 15 countries. 77.1% of students in the AVID program have reported enrolling in a four-year college; the national average is 35%. The AVID curriculum is based on the writing, inquiry, collaboration, and reading, WIC-R method, and is offered as an elective course to students⁴.
4. **Project GRAD** (Graduation Really Achieves Dreams) began at Jefferson Davis High School in Houston, Texas and provides a four-year \$1000 scholarship to every student that graduates high school on time, and provides two five-week summer academic programs.

California Math Engineering Science Achievement (MESA) (<http://mesa.ucop.edu/home.html>)

California Math Engineering Science Achievement (MESA) program is dedicated to helping disadvantaged students excel in math and science and graduate with math-based degrees. It was founded in 1970 and is located in Oakland, CA; the program is administered by the University of California. MESA works with several higher education and industry organizations and is funded by the state legislature, corporate contributions and

² SREB. High Schools That Work. <http://www.sreb.org/programs/hstw/hstwindex.asp>.

³ Fashola, O.S. & Slavin, R.E. Effective Dropout Prevention and College Attendance Programs for Latino Students. February 1997.

⁴ <http://www.avidonline.org/info/?tabid=1&id=549#results>

grants. MESA offers the MESA Schools Program (MSP), the MESA Community College Program (MCCP) and the MESA Engineering Program (MEP); the programs are administered from local sites throughout California. The MESA Schools Program provides services to students in middle and high schools to help them succeed in math and science. The program works with teachers, administrators, school district officials and industry representatives to provide several academic enrichment activities including individual academic plans, study skills training, college and career exploration, as well as parent leadership development and teacher training opportunities. The MESA Community College Program provides academic enrichment in math, engineering and science to community college students to help them excel academically and transfer to four-year colleges. Academic-based community centers are established on campus and students are able to learn about career options, scholarships, internships, and other special programs. The centers also help students in transferring to a four-year institution, provide career advising and networking opportunities and have study skills and professional development workshops. The MESA Engineering Program supports students in four-year educational institutions to receive their baccalaureates. Services include academic excellence workshops, clustering students and teaching group study skills, career advising, networking opportunities and professional development workshops, an orientation course, and a student study center and computer lab. More information about the MESA programs can be found on its website: <http://www.ucop.edu/mesa/home.html>.

Courses, Lesson Plans, and other Resources

Life Sciences Summer Institute (http://www.sandiegowork.com/generate/html/Youth/life_sciences_summer.html)

Life Sciences Summer Institute is offered to students by the San Diego Workforce Partnership in collaboration with BIOCUM, a life science industry association. The program serves to increase student and teacher awareness of the life science industry and related fields of research. The program is open to upper-level high school students, college students, and high school teachers. The internship includes a one week “Boot Camp” training at Miramar College and then a paid industry internship, and ends with a poster presentation. The teacher program includes a 2-week program held at Biogen Idec’s Community Lab facility where teachers can receive training using the AMGEN-Bruce Wallace Biotechnology Laboratory Program curriculum, and then have ½ day industry externships with curriculum connection and implementation workshops offered the second part of each day. The program is supplemented with materials and supplies donated by Invitrogen⁵.

Project Lead the Way (<http://www.pltw.org/index.html>)

Project Lead the Way is a national not-for-profit organization that promotes pre-engineering learning at the middle and high school level. PLTW has successfully developed a pre-engineering curriculum that is currently utilized in over 1,300 schools across the country, and it is now developing a new biomedical series of four courses for high schools. The courses are designed to be project and program based, and provide rigorous and relevant education. The courses under development are Principles of the Biomedical Sciences, Human Body Systems, Medical Intervention, and Scientific Research.⁶

The Office of Science Education at the National Institutes of Health (<http://science.education.nih.gov/>)

The Office of Science Education at the National Institutes of Health offers educational resources for grades K-12. Resources include items such as lesson plans and newsletters in science and health topics.⁷ The Curriculum Supplement Series provides free standards-based curriculum along with information on how it is aligned to each states’ standards.

Health Careers Research Consortium (<http://www.health-careers.org/resources.cfm#Curriculum>)

Health Careers Research Consortium offers free health based project lesson plans to teachers. These plans were identified during a stakeholder interview as a valuable resource for health academies, especially regarding culturally diversity of the students. Topics include: Physical Differences are Part of the Human Experience, Project Based Learning for Health Careers Pathway Students, Solving Health Problems in Your

⁵ http://www.sandiegowork.com/generate/html/Youth/life_sciences_summer.html

⁶ Project Lead the Way. High School Biomedical Sciences Program. <http://www.pltw.org/curriculum/hs-biomedical-science.html>.

⁷ National Institutes of Health Office of Science Education. <http://science.education.nih.gov/>.

Community, Standards for Success 2nd Edition, The Genetic Revolution: Medicine for the 21st Century, Women in Herstory.⁸

California Resource Clearinghouse (<http://www.ca-clearinghouse.net>)

The California Resource Clearinghouse has a resource center on its website with a searchable database of outstanding practices.⁹ Several health and science related practices are available.

Insights in Biology, developed by the Center for Science Education (<http://cse.edc.org/products/default.asp>), is a first-year high school biology curriculum using inquiry-based activities and conceptual connections. A review by the University of Michigan rated it as having the most educative features among eight different textbooks; **Biology: A Human Approach** was ranked second.¹⁰ The center is currently developing a new curriculum with funding from the National Science Foundation, titled Foundations in Science, with a projected completion date of 2010.

The **Biological Sciences Curriculum Study (BSCS)** has a **Center for Curriculum** that provides information on its standards-based biology curriculum developed with funding from the National Science Foundation (http://www.bsccs.org/page.asp?pageid=0|31|53&id=0|high_school_9-12).

The **North Central Regional Education Laboratory (NCREL) Curriculum-Mapping website** helps educators plan new science and math curricula. Users are able to map out their curricula and compare them with leading other countries. The feature is available on its website: <http://currmap.learningpt.org/default.htm>.

Professional Development for Teachers and Counselors

Professional development is one of the most important components of successful teaching, with the U.S. Department of Education ranking it second only to the instructor's cognitive ability in what contributes to effective teaching.¹¹ Research also shows that professional development related to specific content students need to learn rather than broad subjects has an increased positive effect on children's learning and teachers' knowledge and skills. Professional development for science teachers is a life-long process that must take into account the changing and increasing science content. Professional development for science teachers should include hands-on science learning by the teachers, applying that knowledge to teaching, and building the ability for life-long learning.¹² This section provides professional development resources specifically relevant to educators in science, mathematics, health, and diversity, including professional development programs and resources.

Professional Development Programs

PISCES (<http://cse.edc.org/products/default.asp>)

Partnerships Involving the Science Community in Elementary Schools (PISCES) is a San Diego program that pairs elementary school teachers with undergrad and graduate science students, "Science Corps" Fellows, to help with curriculum development and increasing teachers' content knowledge.¹³ The vision of the PISCES project is, "For elementary teachers to have access to materials, curriculum and support to be knowledgeable and confident enough to consistently teach inquiry-centered science". It has been documented that elementary teachers are not well prepared in science content and feel unprepared to teach science; the purpose of the PISCES project is to provide professional development to teachers that prepare them to teach science successfully. By pairing teachers with university level science students, teachers have a

⁸ Conference call on January 5, 2007 with Barbara Weiss and Cindy Beck, California Department of Education. <http://www.health-careers.org/resources.cfm#Curriculum>

⁹ California Resource Clearinghouse. <http://www.ca-clearinghouse.net>.

¹⁰ Beyer, C., Delgado, C., Davis, E.A., & Krajcik, J.S. Investigating High School Biology Texts as Educative Curriculum Materials: Curriculum Review Process. Available: <http://bsccs.org/library/ExecSumInvestHSBioTexts.pdf>.

¹¹ Oliva, M. NCLB Implementation Center Building Capacity Through High-Quality Teachers: A Literature Review on Recruiting and Retaining High-Quality Teachers. Learning Point Associates. November 2005.

¹² National Science Education Standards. Chapter 4, Standards for Professional Development for Teachers of Science. Available: <http://www.nap.edu/readingroom/books/nses/4.html>

¹³ San Diego Science Alliance. PISCES. <http://www.sdsa.org/pisces/>.

knowledgeable resource to assist them in creating curriculum units with a focus on hands-on learning; science students also provide on-going support to the teachers during the school year.

The PISCES project was started as a collaborative effort in 1998 with seed funding from private donations, and funding from a National Science Foundation grant from 1999-2005; it is a program of San Diego State University, San Diego Science Alliance, and San Diego County of Education. Many donors have contributed to the program, including: Biogen Idec, Boston Scientific, Girard Foundation, Hewlett Packard Foundation, Qualcomm Incorporated, Spring, The Legoland Foundation, Richard D. Winter Jr. Matching Gift, a generous gift from the Edgar Hardy Family, The San Diego Foundation's Reuben H. Fleet Discretionary Fund & Colonel Frank C. Wood Memorial Fund, Todd and Mari Gutschow Family Foundation, Anne Prause Blue, Proxima, and Marilyn and Martin Colby. The program has served over 200 teachers in over 40 schools throughout San Diego County, Alaska, and Mexico; over 150 classrooms have been served in San Diego County alone. More than 40 different hands-on science curriculum units have been developed through this program. Current goals for the program include expanding the use of kit-based science instruction, disseminating information and offering ongoing support in the classroom, and maintaining a PISCES instructional materials center. Science kits, online lessons, and a science resources page for teachers are available free of charge on the PISCES website. The PISCES website is: <http://pisc.es.sdsu.edu/>.

MSSELI (http://www.edgateway.net/pub/sdsa_docs/programs/msseli.html)

Middle School Science Education Leadership Initiative (MSSELI) is a regional curriculum leadership academy in San Diego providing professional development to middle school science teachers in science content, leadership strategies, and building collaborative partnerships. The MSSELI program was developed by the San Diego County Office of Education, San Diego City Schools, The San Diego Foundation, and the San Diego Science Alliance. The goal of the program is to identify lead science teachers from middle schools in San Diego County that will participate in an intensive professional development program. The program provides education in analyzing instructional materials, elements of effective instruction, improving student achievement, and leadership development. It also focuses on science content, leadership strategies, and helping to build relationships between San Diego area public and private scientific organizations. The professional development program includes an orientation program, five day academy, and six release days during the academic year; teachers are provided with a stipend for substitute costs and instructional materials. An important component of the program is to educate teachers and assist them with curriculum implementation. MSSELI uses curriculum developed by the National Science Foundation that meets California and National Science Education Standards to educate teachers on inquiry-based instructional materials to be used in the classroom. The teachers that participate in the MSSELI program will serve as a resource for their colleagues. Information on the program and curricula materials are available on the SDSA website: <http://www.sdsa.org/msseli/>.

The California Science Teachers Association has an Extended Professional Development program that offers content-specific courses; upper division credit is available. Courses offered are listed here: <http://www.cascience.org/EPD.html>.

The Partnership for Plant Genomics Education at the **University of California, Davis**, provides on-campus workshops to teachers sponsored by the National Science Foundation and generally free of charge. Current workshops and registration information can be found on the website: <http://ppge.ucdavis.edu/Teacher/events.cfm>.

SEASAND (Science Education Association of San Diego) is funded by the UC Office of the President and the Howard Hughes Medical Institute (HHMI), and is a joint project between UCSD, the California Science Project, and Point Loma Nazarene University. The mission is to provide professional development to science teachers. Information on upcoming events is on the website: <http://csmp.ucop.edu/csp/seasand/index.php>.

Lawrence Livermore National Laboratory Science and Technology Education Program offers several science based workshops that include research and hands-on learning opportunities. A new program is the U. S. Department of Energy Academies Creating Teacher Scientists (DOE ACTS). DOE ACTS is a three year program where science teachers meet every summer to work with science mentors at LLNL. Participants must

be current science teaches and willing to make a three year commitment. Information on the programs is available on the website: <http://education.llnl.gov/teacher.html>.

San Diego Unified School District's Educational Technology Department provides support to educators incorporating technology into teaching. The department provides many services, including training and support for specific projects, customized workshops, and consultation and technology planning. San Diego Unified also offers the **Discover Program** (<http://216.122.44.192/sandinetdiscover/>), which has many professional development and education offerings available to teachers.¹⁴

Project GLAD (<http://www.projectglad.com/>), headquartered in Costa Mesa, California with offices throughout California is a professional development program for teachers of English Language Learners in grades K-8 and has been recognized as a California Department of Education Exemplary Program. It provides teachers with research, theory, and effective strategies to increase literacy and academic achievement.¹⁵

The Biotechnology Institute offers several education programs to students, industry employees, and middle and high teachers and higher education faculty. The National Biotechnology Teacher-Leader Program is a group of thousands of teachers that form a network of advisors that are committed to teaching biotechnology in the classroom and serve as a resource for teachers. Information about this program and other educational programs can be found here: <http://www.biotechinstitute.org/programs/>.

Online Resources

The National Science Teachers Association provides science teachers with high-quality professional development resources. Specific programs include the Institute, which offers online learning, webinars, and symposia designed to provide science learning opportunities to educators. The FDA has partnered with the NSTA to offer courses specifically related to the FDA's work. NSTA also has a networking initiative, Building a Presence for Science that conducts lectures and activities for science educators. Information on these programs is available on the NSTA professional development website: <http://www.nsta.org/profdevelopment>.

Edutopia (<http://www.edutopia.org/php/biglist.php?id=238>) The George Lucas Educational Foundation maintains "The Big List on Ongoing Professional Development" on its website. The list is a continuously updated collection of resources for teachers and educators, including course work modules, articles, and interviews regarding education.¹⁶

One of the services of **WestEd's Teacher Professional Development Program**, headquartered, in San Francisco, CA with offices in San Diego, CA is professional development for teachers of adolescent English language learners in science, mathematics, social studies, and language arts. WestEd also offers a Map of Standards of English Learners, which helps with lesson planning and assessment of English language development and curriculum. Information on WestEd and its program offerings can be found on the website: <http://www.wested.org/cs/we/print/docs/we/home.htm>.

The Biotechnology Institute, a non-profit organization located in Arlington, VA, provides education resources, biotech news, and career information on its website. The mission of the Biotechnology Institute is to engage people in biotechnology, especially young people. It offers year-round national programs to build understanding and awareness of biotechnology among teachers and students. Information and resources can be found on its website: <http://www.biotechinstitute.org>.

The **San Diego Science Alliance (SDSA)** provides an on-line resource catalog to support K-12 science and mathematics education in San Diego. The directory includes information about the type of resource, a brief description of the resource, the subject area focus, age range and audience, as well as contact information. The catalog is fully searchable by multiple criteria and is available online at the following address: http://www.edgateway.net/cs/sdsap/print/sdsa_docs/resources/catalog.htm

¹⁴ San Diego Unified School District. Project Discover. <http://216.122.44.192/sandinetdiscover/>

¹⁵ Project GLAD. What is project GLAD? Available: <http://www.projectglad.com/>

¹⁶ Edutopia. The Big List on Ongoing Professional Development. Available here: <http://www.edutopia.org/php/biglist.php?id=238>

Parent Resources

Research has demonstrated a strong positive correlation between parent involvement and a child's academic achievement, highlighting the need for quality parent involvement. Of concern to California schools, where about half of the students are Latino, is that Hispanic parents generally have shown lower levels of parental involvement when compared to non-minority peers.¹⁷ The Hispanic Dropout Project, initiated by the U.S. Department of Education in 1995, found that parental involvement was very important to helping Latino students succeed.¹⁸ Broad recommendations included:

- Hispanic parents must advocate for their children, either individually, or through a church or community group
- Schools must recruit parents and extended families into a genuine partnership
- Parents should be helped to envision a future for the child and how to get there

General recommendations for all parents include utilizing parents and family as volunteers; helping parents to establish learning environments and provide learning opportunities at home; ensuring effective communication with parents; including parents in decision making; and developing strong collaborative relationships within the community. Below are promising practices identified in the area of parent involvement.¹⁹

Programs

The National Council of La Raza (<http://www.nclr.org/section/pap>)

The National Council of La Raza has a program titled Parents as Partners, which helps parents to take an active role in their children's education. Together with the Parent Institute for Quality Education, the program has developed trainings, curricula, and partnerships that assist Latino families to become engaged in their children's educations. The goal is to help parents become advocates for their children and help them reach their academic potential.²⁰

Families and Schools Together (<http://www.fastnational.org/>)

Families and Schools Together (FAST) is a parent engagement and collaborative prevention program for children ages 3-18; the FAST National Training and Evaluation Center is responsible for the dissemination and evaluation of the program nationally. The program is designed to empower parents to be the primary prevention agents for their children, and build protective factors around children. The FAST program was analyzed in a randomized comparative study with Latino parents of elementary school students. Families were placed in either the FAST program or the FAME group. The FAST program Of the 80 families that agreed to participate in the study from classrooms assigned to the FAST program, 85% completed at least five sessions and graduated, whereas of the 50 families participating from the FAME classrooms, 100% of parents were sent program literature, but only 4% attended the formal parenting lecture. Based on two years of follow-up data, the students in the FAST program achieved significantly higher results on the academic performance scale of the Teacher Report Form (TRF) in comparison to students in the FAME group.²¹

The Parent Institute for Quality Education (<http://www.piqe.org/>)

The Parent Institute for Quality Education in San Diego offers a no-cost, nine week parent involvement program in the parent's language of choice. The program aims to educate parents on how they can help their children in personal and educational development. An optional component is a financial literacy class. A follow-up program is also available that provides monthly phone calls to parents to reinforce the principles learned in the program. Information on the program is available here: <http://www.piqe.org/>.

¹⁷ <http://www.buildassets.org/products/latinoparentreport/latinoparentrept.htm>

¹⁸ Lockwood, A. T.; Secada, W.G. (1999) *Transforming Education for Hispanic Youth: Exemplary Practices, Programs, and Schools* NCBE Resource Collection *Series*, No. 12.

¹⁹ Project Appleseed. The Parental Involvement Checklist. <http://www.projectappleseed.org/chklist.html>.

²⁰ National Council of La Raza. Parents as Parents (PAP). Retrieved December 29, 2006 from <http://www.nclr.org/section/pap/>.

²¹ McDonald, L., Moberg, D.P., Brown, R., Rodriguez-Espiricueta, I, Flores, N.I., Burke, M.P., Coover, G. (2006). After-school multifamily groups: a randomized controlled trial involving low-income, urban, Latino children. *Children & Schools*, 28(1), 25-34.

San Diego City Schools (http://www.sandi.net/parents/pciw/best_practices_2004.pdf)

San Diego City Schools has published a Portfolio of Parent Communications and Involvement Practices with suggestions for each grade level. It lists nine practices at the senior high level. Practices specific to parental involvement were the Parents Weekend Retreat at Gompers High School and Pt. Loma Cluster Coordinating Academy. The Parents Weekend Retreat was sponsored by UCSD – Gear Up coordinators and provided parents with conflict-resolution education and information about college opportunities. The Pt. Loma Cluster Coordinating Academy created a team of administrators, educators, and parents committed to improving education in the Pr. Loma schools.²²

The Arizona State University (ASU) Hispanic Mother-Daughter Program works with Hispanic women students and their mothers to increase academic achievement and college matriculation rates. The program focuses on first-generation Hispanic students and includes workshops, one-on-one visits and program advisors. The goal of the program is to increase the number of Hispanic students who earn bachelor degrees by educating both the mothers and daughters on the importance of education and how to make it happen. Information on the program can be found on its website: <http://www.asu.edu/enroll/hmdp/index.html>.

PRISM (Partners for Reform in Science and Math) Outreach Kit provides information on how to plan and run parent workshops to engage parents in helping their child learn in science and math. The kit works well with all parents, including those that do not have prior education or feel they are not smart enough to help in science and math. This program has been successfully used in the SABIO (Science Achievement in Biology) Program based in San Diego, California.

The Parent/Teacher Home Visit Project was established by the Sacramento Unified School District. It provides home visits by teachers to parents to create and encourage parent involvement. The program has increased test scores and attendance, and decreased suspensions and vandalism. Information on the program and funding opportunities for California schools is available here: <http://www.pthvp.org/>.

Resources

Project Appleseed is a national campaign to improve public schools; one of its goals is increasing parental involvement. Its website suggests practices such as the Parental Involvement Pledge, Parental Involvement Report Card, and parent volunteers in the classroom. These resources can be found on its website: <http://www.projectappleseed.org/>.

The California Department of Education website provides information targeted towards parents and family that want to be involved in a child's education. The website has information on academic content standards, rights of parents, a clearinghouse for multilingual documents, and other relevant information. Parents can access the information through the website: <http://www.cde.ca.gov/ls/pf/pf/>.

The San Diego Unified School District provides information for parents and resources on its parent's website: <http://www.sandi.net/indices/parents.htm>. Resources include a Facts for Parents brochure, academic and student achievement information, and information on how to get involved. The District also has a Parent & Community Involvement Department that works to engage parents and the community in education.

The Parental Involvement Center at San Diego State University is one of six centers in California. The Center has training opportunities in parent involvement for teachers and resources for parents on how to be involved in their child's education. Information about the center and what it offers are available on its website: <http://parent.sdsu.edu/>.

Education News Parents Can Use (<http://www.ed.gov/news/av/video/edtv/index.html>)

²² San Diego City Schools. 2004 Portfolio of Parent Communications and Involvement Best Practices. http://www.sandi.net/parents/pciw/best_practices_2004.pdf

Education News Parents Can Use is provided by the U.S. Department of Education and provides general information on schools, learning and the No Child Left Behind Act. Every third Wednesday it provides a live tele-cast of a current educational issue that is open to parents and educators.²³

Harold J. Ballard Parent Center (<http://www.sandi.net/depts/osss/ballard.html>)

Harold J. Ballard Parent Center is a San Diego Unified School District initiative open to parents of children in the city's Title I schools. It includes the **San Diego Parent University** that offers parents classes on how to be more involved in education, and other programs that educate parents on skills to help their children learn.²⁴

Industry Support and Collaboration

Industry support and collaboration with schools is considered a best practice in education. Moreover, having these partnerships is included in the definition of a health academy and is considered a critical success factor for health academies. San Diego County has strong industry support and collaboration from non-profit organizations, universities, healthcare organizations, pharmaceutical companies and other private companies. Listed below are industries within San Diego County that have collaborated with schools, and promising national programs.

Healthcare and Biotech Organizations

Palomar Pomerado Health is a leader in collaborating and partnering with education in science and health care, and increasing diversity. PPH has strongly supported area high school health academies by providing start-up money, long term equipment loans, a senior clinician every month to lecture in the classroom, and developing a "red shirt" program that allows area high school students to job shadow clinicians in the hospital. PPH provides further on-going support in the form of grant writing on behalf of the schools, and has received a grant from the Parker Family Foundation to enable web-casting from the hospital into schools. It has also worked with local community colleges to increase nursing education opportunities. GO-MED, Growing Our Own Medical Employees Development, is a PPH initiative to increase workforce diversity and provide career opportunities; it works to provide the high school outreach projects and provide staff education to increase diversity from within. PPH was recognized by San Diego Magazine as a top employer in San Diego County and positive diversity initiatives were specifically cited in the article.²⁵

Kaiser Permanente has a Learning Center in Los Angeles, California that offers educational and health outreach programs to residents. Kaiser also offers the Educational Theater program that provides free on-campus lectures by Kaiser employees in health topics. Information about the program can be found on its website: <http://xnet.kp.org/etp/>.

Sharp HealthCare is involved with a number of healthcare and science specific initiatives with community colleges and high schools. Sharp is partnering with the School of Science and Technology at Kearny High School to help them develop the science curriculum. Sharp is also working with Crawford High School on the medversity program, which includes job shadowing at Sharp Memorial Hospital. Sharp has collaborated with the San Diego Workforce Partnership to provide information to school counselors and students on available health careers, and the corporate offices have a standing offer to schools that they will arrange a day-long health career education program for students at the corporate office.²⁶

A recent and comprehensive initiative is the Health Science High School and Middle College located in La Mesa, CA. It is a start-up charter school with a healthcare focus that will open for the 2007-2008 school year. It is open to all students in San Diego County and serves grades 9-12. The budget for the school is about \$2 million and it is supported by state funding and grants. The planning process began in Fall 2005 and Sharp Healthcare has been actively involved in providing programmatic and advisory support for the school during

²³ U.S. Department of Education. Education News Parents Can Use. <http://www.ed.gov/news/av/video/edtv/index.html>.

²⁴ San Diego Unified School District. Harold J. Ballard Parent Center. <http://www.sandi.net/depts/osss/ballard.html>.

²⁵ San Diego Magazine. Best Places to Work with 500 of More Employees. www.sandiegomag.com/media/San-Diego-Magazine/September-2006/500-or-More-Employees/.

²⁶ Interview on January 10, 2007 with Sharp HealthCare employees Diane Delaney, VP Employee Relations; Joyce Stewart, Director of Workforce Planning and Recruitment; Caroline Dirita, Senior Workforce Planning Specialist.

this process. Support from Sharp will be ongoing as many of the members of the school's governing board are medical professionals and administrators from Sharp; other governing board members include educators from San Diego State University (SDSU).

The Nurses Now Program is a collaborative effort of eight San Diego area hospitals and health organizations to provide more nursing education opportunities at San Diego State University (SDSU). The program was founded in 2000 and has significantly increased the number of nurses enrolled in the SDSU nursing programs²⁷.

Health Careers Exploration Summer Institute is a summer learning program for high school students, which includes coursework and rotations at two hospitals, Kaiser and Sharp Grossmont; students earn credit at Grossmont Union High School. The program is a result of a collaborative effort between education and industry.²⁸

The San Diego Border Area Health Education Center (AHEC) is a federally-funded collaborative effort between Scripps Mercy Hospital, Scripps Family Practice Residency Program and the University of California, San Diego (UCSD) that offers a wide variety of preventive health, youth into health careers and residency training initiatives. The AHEC mission states that "through education, leadership and community collaborations, create a health care workforce that improves access to and quality of care for underserved populations in border counties." The AHEC goals are to:

- To increase the health care workforce pipeline with a special focus on youth, displaced workers and individuals seeking a second career
- To recruit and retain diverse professionals across the spectrum of health care and social services working in underserved areas
- To improve the skills of health care professionals, including students, to promote community health, wellness and cultural competence
- To enhance community wellness and disease prevention through a variety of health care initiatives

Some of the youth specific programs include the School-to-Health Career Mentoring Program, Camp Scripps, Surgery Viewing, Health Professions Overview 101, Health Professionals in the Classroom, Doc For A Day – at UCSD, Healthy Youth Healthy Futures Program Curriculum, and a Health Career Post. The aim of these programs are to educate students on health career opportunities and engage them in health and science learning.

The School-to-Health Career Mentoring Program provides students from local high schools with mentors in local health care organizations in a variety of areas, including the emergency department, volunteer services, finance, and radiology department. The program allows students to learn about health careers, develop ambitions, and become comfortable in the workplace through weekly meetings with mentors and career workshops. Camp Scripps is offered during the summer and provides students with additional hands-on interaction with local health care professionals.

Surgery viewings provide students with the opportunity to observe orthopedic surgeries along with one-on-one interaction with the surgeon during the procedures.

Health Professions Overview 101 allows students to spend time in the hospital and clinical departments learning about the health professions that exist in a hospital.

Health Professionals in the Classroom and UCSD's Doc For A Day are programs where medical residents, family practice residents or other health professionals are invited to the classroom to share their experiences directly with students.

²⁷ San Diego State University. Nurses Now. <http://nursing.sdsu.edu/aboutnursesnow.php>.

²⁸ Health Careers Exploration Summer Institute. http://www.cccco.edu/divisions/esed/sb70/health_sample.doc

The Health Career Post provides a similar opportunity for students to learn about health careers in the hospital and interact with the health professionals while learning leadership and advocacy skills.

Health careers curricula and brochures have been developed with input from high school students, Family Medicine residents, and medical professionals, and are used at outreach events to engage high school students in health careers and provide information on the available health career opportunities. The Healthy Youth Healthy Futures Program Curriculum serves to provide information to students on health careers, healthy living, and college and training courses in health careers as part of their core curriculum.

Another youth program of AHEC and the Scripps Family Medicine Residency Program is a school-based clinic at Palomar High School. The clinic provides care to students and their family, and students participate in health education programs designed by educators, students, and residents. Currently, a second clinic is being developed at Southwest High School.

More information about the San Diego Border AHEC is at <http://meded.ucsd.edu/ahec/index.html> or can be found by calling 619 692-7285.

Amylin Pharmaceuticals participates in the San Diego High School and Technology Fair; High School Job Shadow Fair, provides support for the Preuss School, and has provided funding to train students as math and science teachers at UC schools. Information about its community involvement programs can be found here: <http://www.amylin.com/about/community.cfm>.

Biogen Idec, a San Diego biotech company, has a Community Lab that students can visit and work in with Biogen Idec scientists.²⁹ The Community Lab is located within the Biogen Idec research buildings and is opened to middle and high school students and their teachers. The lab provides students with an opportunity to conduct science in a professional laboratory outside of the classroom, with both scientists and teachers providing instruction. The Community Lab also offers class visits, professional seminars and student mentoring; programs are provided to the community at no cost at both the San Diego, CA and Cambridge, MA locations of Biogen Idec.

BIOCOM is a life science industry association located in San Diego, CA. Issues addressed by the association are capital formation, public policy, workforce development, and scientific discovery and development. Over 550 Southern California companies are represented by the association. BIOCOM, in collaboration with the San Diego Workforce Partnership, has developed the Life Sciences Summer Institute that provides students and teachers exposure to the life sciences industries. More information about BIOCOM is available at its website: <http://www.biocom.org/>.

Universities and Higher Education

The **School of Medicine at the University of California, San Diego** has an Office of Diversity & Community Partnerships which offers programs to the community to increase diversity in the health sciences. It is run by Dr. Sandra Daley, Assistant Dean of Diversity & Community Partnerships and an associate clinical professor of pediatrics. The office offers several education programs from K-12 through higher education to increase diversity in the health sciences. The programs include the Hispanic Center of Excellence, Community Outreach Partnership-Science Enrichment Program, C.A.P. Student Web Portal, and the San Diego Border Area Health Education Center.

The *Hispanic Center of Excellence* works to develop the scientific knowledge and research skills of Hispanic students so that they are able to successfully complete their professional school education and serve in our communities. The main goal is to develop faculty by creating a pipeline of well qualified under-represented minority students. Hispanic students accepted into the medical school participate in a four or five year program that includes supervised research, and writing of research papers, as well as activities such as tutorials,

²⁹ Biogen Idec. Community Relations. <http://www.biogenidec.com/site/015.html>.

counseling and preparation for the United States Medical Licensing Examination (USMLE) that encourage student retention and success.

The *C.A.P. Student Web Portal* provides electronic resources for undergraduate medical education. Information is provided on student awards, student organizations, and general information. There is also a Curricular Project Showcase featuring web-based health sciences instructional materials developed at UCSD. Full curricula are available here: http://meded.ucsd.edu/ucsd_web_resources.html.

The *San Diego Border Area Health Education Center* is a collaborative effort with funding from the Health Resources and Services Administration (HRSA), and affiliation with the UCSD School of Medicine. The San Diego Border AHEC has several community collaborative partners and offers many programs in the community to engage and train students in health careers, and provide culturally competent care. More information about the San Diego Border AHEC can be found here: <http://meded.ucsd.edu/ahec/index.html>.

The School of Medicine also has a chapter of the *Latino Medical Student Association* (<http://www.lmsa.net/chapters-uc-sandiego.htm>). The LMSA is affiliated with the Hispanic Center of Excellence and members provide mentoring with undergraduate students, and bring junior high and high school students to UCSD to attend workshops about college admission and medical science.

Gear Up is a federally funded college preparatory program for educationally underserved students. It provides counseling and mentoring, test preparation, field trips and activities, and college campus visits. UCSD and Cal-SOAP administer the Gear Up program in the San Diego area, serving Pauma High School, Sweetwater Union High School, Gompers Secondary School, and Crawford High School³⁰.

The Pre-College Institute at San Diego State University (<http://sea.ucsd.edu/media/outreach.html#GEARUP>) offers several programs that work with health academies. 31 Programs include GEAR UP, Talent Search, and Upward Bound. As stated above, GEAR UP works with students from 7th-12th grades to increase the number of low-income students who attend and succeed in postsecondary education. The Sweetwater Union High School District earned a \$19 million federal grant to operate the GEAR UP program and the Pre-College Institute has partnered with the school district to operate the program.

The **SDSU Talent Search Program** is funded by the U.S. Department of Education to help traditionally disadvantaged middle and high school students pursue higher education. The program provides academic, career, and financial counseling to students to assist them in enrolling in postsecondary institutions. The program also uses volunteer undergraduate and graduate students to provide literacy tutoring to at-risk students in the classroom. The program serves students in select schools in the Sweetwater Union High School District and San Diego City Schools.

There are two **Upward Bound** programs, the Upward Bound Classic and the Upward Bound Math/Science programs. The Upward Bound Classic program provides a six week residential program on the SDSU campus and follow-up services for the following academic year. It is funded to serve 50 students during the summer and 60 students during the academic year. Mentoring and college-preparation activities are provided during the academic year by college-age mentors and Upward Bound staff. SDSU was awarded a center to offer the Upward Bound Math/Science program to 25 Region IX students and 25 local students. The program offers an intensive summer program for a total of 50 entering 11th and 12th grade students. The program includes math, writing, science and computer courses, and workshops in career exploration and adolescent issues. Students also participate in a major research project.

Grossmont-Cuyamaca Community College District is involved in the continued growth and expansion of the health pathways in Grossmont Union High School District (East County). Science and Health Professions faculty discuss course and program alignment and are currently exploring articulation possibilities. Health pathway students are invited to tour college facilities and will receive program-specific academic and career advising upon pathway program completion.

³⁰ UCSD. Gear UP. <http://sea.ucsd.edu/media/outreach.html#GEARUP>.

³¹ <http://www-rohan.sdsu.edu/dept/sdsutrio/index.html>

SB70 Quick Start Partnership Grant: **Regional Allied Health and Science Initiative (RAHSI)**: An effort to assist high schools in increasing awareness of allied health careers, improving performance in high school and college science courses, and improving transition and retention rates in allied health programs. RAHSI focuses on redesigning high school science curricula to incorporate healthcare applications, career exploration activities, state biology and healthcare standards, and industry skills through a series of regional collaboration meetings that will include high school and college science instructors, counselors, healthcare education teachers, ROP, allied health faculty, and industry members. RAHSI will continue to provide SB70 funding to support high school career/technical programs through 2013, but it is subject to legislative budget discussions each year.

The San Diego Supercomputer Center offers TeacherTECH and OptIPuter to help support teachers bringing science into the classroom.³² SDSC was formed to provide scientists with large and fast computers to conduct research. Resources include supercomputers, scientific and software development staff and support personally. It was founded in 1985 and is located on the UCSD campus, operating primarily with funding from the National Science Foundation (NSF). TeacherTECH aims to share science technology tools with teachers and offers hands-on workshops, curriculum materials, and online learning. OptIPuter is a project developed by SDSC, Scripps Institute of Oceanography, the Preuss School, and Cal-(IT)2 OptIPuter project. A model classroom was designed at the Preuss School to explore innovative techniques in earth science education by using technology. One of the first steps of the projects, providing earth science lesson plans online for teachers has been completed and is accessible here: <http://education.sdsc.edu/optiputer/>. The goal of the project is to make freshly available scientific data available to teachers.

Resources and Funding

Resources and funding independent of the topics covered above and relevant to health and science learning and careers are listed here.

The **Choose Nursing** website has an area geared specifically to high school students with information on everything from the types of nursing careers available to how to help pay for a nursing education. The high school information can be found here: http://www.choosenursing.com/hs_students/index.html.

LifeWorks (<http://science.education.nih.gov/LifeWorks>), offered by the Office of Science Education at NIH, provides information on health careers, personal success stories of health professionals, future earning information, and how to prepare for a health career at each grade level.

Health Occupations Students of America (HOSA), and California HOSA are student organizations with a mission of promoting health careers. The websites include information on scholarship opportunities, health career information, and student events. More information at: <http://www.cal-hosa.org/index.asp>.

San Diego County Regional Occupational Program website provides information to students and teachers on the ROP curriculum and opportunities.³³

Kids Into Health Careers is a federal government program that has presentations on its website about health careers including health career options and how to finance education. The resources are provided for students, parents and educators, and are available here: <http://bhpr.hrsa.gov/kidscareers/>.

The National Academy Foundation provides information on academies and recommendations on why and how to start one on its website: <http://www.naf.org/cps/rde/xchg>.

The National Career Academy Coalition has published a 130 page guide to developing a career academy. Information on how to purchase it is available here: <http://www.ncacinc.org/375865311151235/site/default.asp>.

³² San Diego Supercomputer Center. Science in the Classroom.
<http://education.sdsc.edu/index.php?module=ContentExpress&func=display&ceid=67>.

³³ San Diego County Office of Education. Regional Occupational Program. Retrieved December 29, 2006 from <http://www.sdcoe.k12.ca.us/rop/>.

The **Smithsonian Education** website offers lesson plans in several subject areas, including health, science, and technology. It also offers a Scholars in the Schools program where Smithsonian scholars present talks in their area of expertise at schools around the country typically to students in 4-12 grades; costs for the program are \$3000-\$40,000 depending on the exact program. Professional development offered by the Smithsonian Education includes an online writing workshop. The online writing workshop provides information on how to guide students through a museum visit with pre and post-visit activities that can be adapted a museum visit in any community. The website for Smithsonian Education is: <http://www.smithsonianeducation.org/>.

Federal Resources for Educational Excellence pulls together resources and learning activities from federal agencies in math, science, language arts, history, arts and music, and health and physical education.³⁴

Iniciativa is a Massachusetts Education Initiative for Latino Students; the initiative works with parents, educators, and other stakeholders to empower people to be advocates for public education and to educate the community about the needs of Latino students. Accomplishments of the program include reaching out to hundreds of parents of failing students, building a college access program, and developing parent groups.³⁵

The Brockton, Massachusetts school district has developed a model parental engagement program featuring parent liaisons and a variety of parental involvement activities. Results of the program include higher attendance of parents at meetings, more participation in events, and higher numbers of parents volunteering.³⁶

Grant Funding

The grant resources listed below provide funding to educators, schools, or school districts. The information provided includes the title of the grant, eligible organizations and/or individuals, a brief program description, and grant amounts available if they are provided by the funding organization. This partial listing of grant sources includes federal and state governments, and non-profit organizations or foundations. Grant funding opportunities are dynamic and change frequently. Readers are encouraged to visit the funder's web site to obtain the most recent information. In some case the grant opportunity documented below has expired but readers may wish to continue to monitor the funders site for renewed funding opportunities or additional related grants.

The Bayer Foundation

Title: Not applicable.

Eligibility: 501(c)(3) tax-exempt organizations

Program description: The foundation will accept proposals in its four interest areas: civil and social service programs, education and workforce development, arts and culture, and health and human services.

Application Due Date: Proposals are accepted on an ongoing basis.

Funding Amount: Varies

References: <http://www.bayerus.com/foundation/index.html>

The Braitmayer Foundation

Title: Not applicable.

Eligibility: K-12 schools and organizations with projects for K-12 students.

Program description: The Foundation is interested in K-12 education throughout the United States. Of particular interest are curricular and school reform initiative, and preparation of and professional development opportunities for teachers, particularly those which encourage people of high ability and diverse background to enter and remain in K-12 teaching.

Application Due Date: Summer Grant Cycle Due Date is June 1st;

Fall Grant Cycle Due Date is November 15th

³⁴ http://free.ed.gov/subjects.cfm?subject_id=41

³⁵ Iniciativa. Iniciativa's mission, vision, and strategy. Retrieved December 29, 2006 from <http://www.gaston.umb.edu/iniciativa/index.html>.

³⁶ Devaney, Elizabeth. Family engagement: building strong school communities. Retrieved December 29, 2006 from <http://www.alliance.brown.edu/stories/story1105.shtml>.

Funding Amount: Varies, up to \$35,000.

References: <http://www.braitmayerfoundation.org/>

Bill and Melinda Gates Foundation

Title: Not applicable.

Eligibility: The majority of grants are awarded to U.S. 501 (c)(3) organizations and other tax-exempt organizations identified by the staff.

Program description: The foundation's grant making philosophy flows from the belief that every human life has equal value. In deciding how to invest resources, we look for projects that: help reduce inequities in neglected areas, produce measurable results, catalyze increased momentum, scale, and sustainability of change, collaborate with government, philanthropic, private-sector, and not-for-profit partners, favor preventative approaches, leverage support from other sources, and advance our current strategies, accelerating the work we are already supporting. Focus areas include global health and development, and education. Funding for U.S. education is provided under the U.S. Program, and the majority of grants awarded are to programs identified proactively by the foundation; letters of inquiry or unsolicited proposals are not accepted. RFP's are occasionally available and are listed here:

<http://www.gatesfoundation.org/ForGrantSeekers/OpenRFPs/>.

Application Due Date: Not applicable.

Funding Amount: Varies

References: <http://www.gatesfoundation.org>

California Department of Education

The California Department of Education provides funding in a variety of areas; open grants applicable to high school health careers/science academies and pathway programs are listed below. Grant opportunities are continuously updated and information can be found here: <http://www.cde.ca.gov/fg/fo/>; signing up to receive e-mails on funding opportunities as they are announced is available here:

<http://www.cde.ca.gov/fg/fo/af/joinlist.asp>.

Title: California Health Science Educators Institute funding

Eligibility: Local educational agencies developing or implementing a Health Science Pathway Program.

Program description: The purpose of the funding is to assist school sites that are developing or are currently engaged in health science career pathways. Funding provides time to develop a strategic plan for pathway implementation and for pathway teams (teachers, administrators, counselors, postsecondary partners and industry partners) to attend the California Health Science Educators Institute in June of 2007.

Application Due Date: February 15, 2007

Funding Amount: Varies, up to \$10,000 per pathway program.

References: Application: <http://www.cde.ca.gov/fg/fo/r17/hsedinst06rfa.asp>, Background/fiscal:

<http://www.cde.ca.gov/ci/ct/hc/index.asp>

Title: Career Technical Education Programs Equipment, Grades Seven Through Twelve

Eligibility: Allocations will be awarded only to school districts, regional occupational centers and programs, charter schools, and county offices of education that offer career technical education programs in grades seven through twelve.

Program description: Funds provide local education agencies (LEA) with an important one-time opportunity to increase investments in Career Technical Education equipment, supplies, and minor facility reconfigurations for courses in grades seven through twelve.

Application Due Date: May 15, 2007

Funding Amount: Funding will be allocated based on students enrolled in career technical education courses based on the 2004-05 enrollment for grades seven through twelve. The minimum amount that can be received is \$3,250.

References: <http://www.cde.ca.gov/fg/fo/profile.asp?id=878>, Application:

<http://www.cde.ca.gov/fg/fo/r17/cte06rfa.asp>

Title: Career Exploration and Development for 7th and 8th Graders

Eligibility: Only California Community College districts are eligible to be the fiscal agents for these grants. However, funded projects must include at least one middle school as a partner, and preference will be given to projects with multiple middle school partners. Other partners may include high schools, ROCPs, business and industry representatives, and student organizations.

Program description: The intent of the Career Exploration and Development RFA is to fund projects that create, improve or expand middle school career exploration and awareness activities, programs, curriculum and/or events that can be replicated regionally or statewide. Projects will develop curriculum for career awareness and exploration strategies. One of the California Industry Sectors is Health Science and Medical Technology.

Application Due Date: 5pm, Friday, March 30, 2007

Funding Amount: Up to \$250,000 per grant.

References: <http://www.cccco.edu/divisions/esed/sb70/sb70.htm>

Title: Specialized Secondary Programs

Eligibility: Each district may submit one SSP application for a comprehensive high school that is not currently receiving SSP funds. The proposed program must be new to the school and serve students in at least two consecutive grades 9-12. Teachers must develop curriculum and instructional methodologies that will be made available to other California schools. Applicants for an SSP Demonstration Site grant must have received SSP funding between 1995 and 2006 and must still have their SSP fully implemented.

Program description: Specialized Secondary Programs (SSP) grant funds may be used for programs that provide students with advanced learning opportunities in a variety of subjects. Although these programs retain a core course work element within the approved curriculum, they may specialize in such areas as English-language arts, mathematics, science, history and social science, foreign language, and the visual performing arts. The acquisition of technology skills and their use as a tool for instruction and learning is also emphasized in these programs.

Application Due Date: In the fall of each year, a Request for Application (RFA) for the planning year is mailed to every public high school, public school district, and county office of education in California. The RFA is also posted on the CDE Web site.

Funding Amount: Unknown

References: <http://www.cde.ca.gov/fg/fo/profile.asp?id=872>

Title: California Partnership Academies

Eligibility: No funding for new California Partnership Academies is currently available.

Program description: The Partnership Academy Model is a three-year program, grades 10-12, structured as a school-within-a-school. There are currently 290 funded programs throughout California.

Application Due Date: None currently; may become available in the future.

Funding Amount: Unknown

References: <http://www.cde.ca.gov/ci/gs/hs/cpagen.asp>

Title: After School Education and Safety

Eligibility: No funding for new After School Education and Safety is currently available.

Program description: Funding supports the After School Education and Safety (ASES) Program, which provides academic and enrichment activities as constructive alternatives for kindergarten through grade nine students in before- and after-school programs. The application process is for all eligible applicants (including local educational agencies and public agencies) requesting to establish before- and after-school programs at public elementary, middle, and junior high schools.

Application Due Date: None currently; may become available in the future.

Funding Amount: Unknown

References: <http://www.cde.ca.gov/ls/ba/as/>

California Endowment

Title: Not applicable

Eligibility: Nonprofit organizations that are exempt under Section 501(c)(3) of the Internal Revenue Code and are classified as "not a private foundation" under Section 509(a), or independent sponsored projects of a

nonprofit 501(c)(3) organization acting as a fiscal sponsor, or government and public agencies. We will consider grants to organizations not meeting these requirements on an individual and limited basis.

Program Description: Grants focusing on one of the three missions, access to health, culturally competent health systems, and community health and elimination of health disparities are available in three types: projects, capacity-building activities, and core operating activities.

Application Due Date: Unsolicited proposals are accepted on an ongoing basis. Occasionally, RFPs will become available and will be listed on the website.

Funding Amount: Varies

References: Homepage: <http://www.calendow.org/index.stm>, Grant Application Guide: http://www.calendow.org/grant_guide/index.stm

California Wellness Foundation

Title: Diversity in Health Professions

Eligibility: Nonprofit organizations that are exempt under Section 501(c)(3) of the Internal Revenue Code and that are not private foundations as defined in IRC Section 509(a) or are public charities as defined in IRC Section 170(b)(A)(vi).

Program Description: Diversity in Health Professions is one of several priority areas for the California Wellness Foundation. Grants in this area address the issue of diversity in the health professions and are commonly given to organizations that provide: pipeline programs; scholarships; outreach and retention programs; internships and fellowships; and loan repayment programs for ethnic minorities that are underrepresented in the health professions. Careers in medicine, nursing, public health and other allied health professions are included. Organizations that support leadership development for people of color in the health professions are also eligible for funding. In addition, the Foundation funds organizations that educate policymakers and advocate for public and institutional policies that promote diversity in the health professions.

Application Due Date: Letters of interest are reviewed on an ongoing basis.

Funding Amount: Varies

References: http://www.tcwf.org/health_issues/diversity_in_health.htm, http://www.tcwf.org/grants_program/how_to_apply.htm

Ford Foundation

Title: Not applicable.

Eligibility: Activities supported by grants and program-related investments must be charitable, educational or scientific, as defined under the appropriate provisions of the U.S. Internal Revenue Code and Treasury Regulations.

Program description: Ford's trustees and staff try to advance human welfare by making grants to develop new ideas or strengthen key organizations that address poverty and injustice, and also promote democratic values, international cooperation and human achievement. Within these broad aims, we focus our grants on fields within Asset Building & Community Development, Peace & Social Justice and Knowledge, and Creativity & Freedom.

Application Due Date: Requests are accepted on an ongoing basis.

Funding Amount: Varies

References: Guidelines for Grant Seekers: <http://www.fordfound.org/about/guideline.cfm>

Health Services Research Administration (U.S. Department of Health and Human Services)

Title: Physician Assistant Training in Primary Care.

Eligibility: Public or nonprofit private hospitals, accredited schools of medicine or osteopathic medicine, or public or private nonprofit entities are eligible to apply.

Program description: To meet the costs of projects to plan, develop and operate or maintain approved programs for the training of physician assistants.

Application Due Date: February 12, 2007

Funding Amount: Approximate size of awards are \$352,000.

References: <http://www.hrsa.gov/grants/default.htm>

Howard Hughes Medical Institute

The Institute is a non-profit medical research organization focusing on biomedical science, and supports education in these areas through grant funding. There are no grants specifically eligible for K-12 schools; however, there are grants that support science education at this level. Grant information is here:

<http://www.hhmi.org/grants/>.

Intel Schools of Distinction

Title: Schools of Distinction

Eligibility: This awards program is open to K-12 public, private, charter, parochial schools in the United States, Department of Defense Dependents Schools, and Bureau of Indian Affairs schools. Home schools are not eligible.

Program description: The mission is to identify schools that exemplify the best of the best and serve as role models to other schools across the nation in math and science, specifically focusing on identifying schools with learning environments that promote 21st century learning skills, such as digital literacy, problem solving, critical thinking and collaboration as a benchmark for academic excellence in mathematic and scientific achievement.

Application Due Date: February 28, 2007.

Funding Amount: \$10,000 grant and up to \$150,000 in products and services.

References: <http://www.schoolsofdistinction.com/index.php>

Josiah Macy, Jr. Foundation

Title: Not applicable

Eligibility: Tax-exempt institutions or agencies.

Program Description: Grants focusing on the foundation's funding priorities are available. The four areas are:

1. Projects to improve medical and health professional education in the context of the changing health care system;
2. Projects that will increase diversity among health care professionals;
3. Projects that demonstrate or encourage ways to increase teamwork between and among health care professionals; and
4. Educational strategies to increase care for underserved populations.

Application Due Date: Proposals are accepted on an ongoing basis.

Funding Amount: Varies

References: Grant guidelines: http://www.josiahmacyfoundation.org/index.php?section=grant_guidelines;

Homepage: <http://www.josiahmacyfoundation.org/index.php?section=home>

The Parker Foundation

Title: Not applicable.

Eligibility: A charitable organization under Internal Revenue Code Section 501(c)(3) and California Revenue & Taxation Code Section 23701d.

Program description: The Parker Foundation funds charitable organizations operating in San Diego County. Areas which have been funded include: cultural, adult and youth services, medical, education, community activities, and environment.

Application Due Date: Requests are accepted on an ongoing basis.

Funding Amount: Varies

References: <http://www.theparkerfoundation.org/index.html>

Perkins Federal Funding (through the California Department of Education)

Title: Not applicable.

Eligibility: School districts.

Program description: Funding is from the Vocational Education Basic Grant Award from the U.S. Department of Education under Title I of the Carl D. Perkins Vocational and Technical Education Act of 1998. The Perkins act was established to further integrate academic and career-technical instruction, and improve career-technical education programs.

Application Due Date: None at this time.

Funding Amount: Varies

References: <http://www.cde.ca.gov/ci/ct/pk/>

Price Charities

Title: Weingart-Price Fund

Eligibility: Recipients must be section 501(c)(3) qualified organizations, and organizations receiving funds must be based in San Diego or Imperial Counties (California) and the funds must be expended for the benefit of residents in these two counties.

Program description: Grants will generally be made to organizations which can demonstrate that they deliver their services effectively and efficiently, and innovative and well-conceived pilot programs directed toward youth or the disadvantaged with special emphasis on those who live in City Heights (San Diego, CA). Those requesting program grants or funds for pilot programs will need to demonstrate a capacity to measure and quantify results and, hopefully, have a reasonable chance of replication in other communities.

Application Due Date: Requests are accepted on an ongoing basis.

Funding Amount: Varies

References: http://www.pricecharities.com/programs_weingart.shtml

Toshiba America Foundation

Title: K-6 Grants; 7-12 Grants, Featured Grants

Eligibility: K-12 teachers

Program description: The foundation funds projects designed by teachers to improve science and mathematics education from K-12.

Application Due Date: Large grant applications due February 7, 2006; other applications are accepted on an ongoing basis.

Funding Amount: Teacher grants up to \$1000.

References: <http://www.toshiba.com/tafpub/jsp/home/default.jsp>

The RGK Foundation

Title: Not applicable.

Eligibility: Organizations certified as tax exempt under Sections 501(c)(3) or 170(c) of the Internal Revenue Code and classified as "not a private foundation" under Section 509(a). Hospitals, educational institutions, and governmental institutions meeting these requirements are eligible to apply.

Program description: The foundation funds awards in the following areas: education, community, and medicine/health.

Application Due Date: Letters of inquiry are accepted on an ongoing basis.

Funding Amount: Most grants awarded are under \$25,000.

References: <http://www.rgkfoundation.org/>

Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation is devoted to improving the health and health care of all Americans. As of December 28, 2007 no requests for proposals specifically for secondary education were available. Future funding opportunities can be found on the Open Calls for Proposals webpage:

<http://www.rwjf.org/applications/solicited/cfplist.jsp>. The website for the foundation is: <http://www.rwjf.org/>.

W.K. Kellogg Foundation

Title: Not applicable.

Eligibility: Type 501(c) 3, 509(a) organizations.

Program description: The foundation will consider funding requests in its interest areas: health, food systems and rural development, youth and education, philanthropy and volunteerism, Greater Battle Creek, and learning opportunities.

Application Due Date: Requests are accepted on an ongoing basis.

Funding Amount: Varies

References: <http://www.wkkf.org/default.aspx?tabid=63&ItemID=6&NID=41&LanguageID=0>

Flyers:

This section to follow includes sample flyers that can be customized for use by schools.



Latino Health and Science Career Connections

For Students:

Facts about Healthcare Jobs

- Healthcare will be one of the fastest-growing industries over the next decade.¹
- More new jobs created between 2004 and 2014 will be in health care than in any other industry.
- Most healthcare workers have jobs that require less than 4 years of college education, but health diagnosing and treating practitioners are among the most educated workers.²
- California's healthcare workers do not reflect the diversity of the state population.³
- Bilingual and minority students and healthcare workers are in very high demand.
- Jobs that are the most in demand are also the ones that usually see the highest growth in income.
- There are over 200 different jobs in healthcare ranging from doctor to pharmacy technician.⁴

Why Should I Choose a Health Career?

- Well paying healthcare careers are available for all levels of education.
- Earn a good living and support a family with a stable and secure career.
- Make a difference and provide better access to health care to those who need it in the community.
- Health professionals work in many different places, including:
 - Hospitals, clinics, nursing homes, mental health facilities, and managed care organizations
 - Federal, State, and local government agencies, universities, and research organizations
 - Medical supplies, equipment, and pharmaceutical industries
- Attain skills that are in high demand.

What should I do to prepare for a health career and college?

- Complete your high school education (diploma or GED).
- Take as many math and sciences classes as possible.
- Talk to teachers, role models, and healthcare professionals about what kind of job you want.
- Talk to your counselor or teacher about what courses to take and what programs are available.⁵
- **Participate in a Medical Pathway or Healthcare Academy if your school offers one.**
- You will have more options if you start planning now and keep your grades up!

For Parents:

What are the academic requirements and how can I afford education for my child?

- Students must complete high school education, either a diploma or GED.
- Students will need to get national test scores that are acceptable to the program they want to enter.
- They should take as many math and sciences classes as they can.
- Encourage your child to talk to teachers, role models, and healthcare professionals about careers.
- The cost of education depends on the profession and program your child chooses.
- There are many sources for scholarships, loans, and grants, including:
 - ✓ Federal, State and local government financial aid programs
 - ✓ Companies, including businesses in your neighborhood and financial institutions
 - ✓ Professional associations, community and national organizations and social groups
 - ✓ Hospitals, clinics, and other health care facilities

¹ <http://www.explorehealthcareers.org/en/index.aspx>

² <http://www.bls.gov/oco/cg/cgs035.htm>

³ http://www.tcwf.org/news_archive/jan_27_06_pub_education.htm

⁴ <http://science.education.nih.gov/LifeWorks.nsf/alpha.htm>

⁵ <http://science.education.nih.gov/LifeWorks.nsf/Information/Preparing+for+College+-+Grade+8>

Conexiones Latinas de Carreras de Salud y Ciencias

Para Estudiantes:

Hechos sobre Empleos de Cuidados de Salud

- Cuidados de la Salud será una de las industrias con mayor crecimiento durante la siguiente década. (1)
- Entre 2004 y 2014 serán creados más empleos nuevos en la industria de Cuidados de la Salud que en cualquier otra.
- La mayoría de los trabajadores de Cuidados de la Salud tienen trabajos que requieren menos de 4 años de educación universitaria, pero los practicantes de diagnósticos y de tratamientos de salud están entre los trabajadores más educados. (2)
- Los trabajadores de Cuidados de la Salud de California no reflejan la diversidad de la población estatal. (3)
- Los estudiantes bilingües y minoritarios y los trabajadores de Cuidados de la Salud tienen una demanda muy alta.
- Los trabajos que tienen más demanda son también los que usualmente ven el crecimiento más alto en ingresos.
- Hay más de 200 empleos diferentes en Cuidados de la Salud desde doctor hasta técnico farmacéutico. (4)

Porque debo elegir una Carrera de Salud?

- Las carreras bien pagadas de Cuidados de la Salud están disponibles para todos los niveles de educación.
- Ganarse una buena vida y mantener una familia con una carrera segura y estable.
- Hacer una diferencia y proveer mejor acceso para Cuidados de la Salud para aquellos que lo necesiten en la comunidad.
- Profesionales de Salud trabajan en muchos lugares diferentes, incluyendo:
 - Hospitales, Clínicas, Asilos, Instalaciones de Salud Mental, y organizaciones de manejo de cuidados.
 - Agencias de gobierno Federal, Estatal y local, universidades y organizaciones de investigación.
 - Productos médicos, equipo e industrias farmacéuticas.
 - Alcanzar habilidades que tienen mucha demanda.

Que debo hacer para prepararme para una Carrera de Salud y la Universidad?

- Completar tu educación de Preparatoria (diploma o GED).
- Tomar todas las clases de ciencias y matemáticas que te sean posibles.
- Hablar con maestros, modelos a imitar y profesionales de Cuidados de Salud sobre que clase de empleo te interesa.
- Hablar con un asesor o maestro sobre que cursos tomar y que programas hay disponibles. (5)
- Participar en una Trayectoria Médica o Academia de Cuidados de la Salud si tu escuela ofrece una.
- Tendrás más opciones si empiezas a planear desde hoy y mantienes buenas calificaciones.

Para Padres:

Cuales son los requisitos académicos y como puedo proporcionar educación para mi hijo?

- Los estudiantes deben completar su educación de Preparatoria, ya sea diploma o GED.
- Los estudiantes necesitarán obtener puntuaciones en exámenes nacionales que sean aceptables para el programa que quieren entrar.
- Ellos tendrán que tomar todas las clases de ciencias y matemáticas que les sean posibles.
- Anima a tu hijo/a para que hable con maestros, modelos a imitar y profesionales de Cuidados de Salud sobre carreras.
- El costo de la educación depende de la profesión y programa que tu hijo escoja.
- Hay muchas fuentes de información para becas y préstamos, incluyendo:
 - ✓ Programas de Ayuda Financiera Federal, Estatal y local.
 - ✓ Compañías incluyendo negocios en tu vecindad e instituciones financieras.
 - ✓ Asociaciones profesionales, organizaciones nacionales y comunitarias y grupos sociales.
 - ✓ Hospitales, Clínicas y otras instituciones de cuidados de la ciudad.

¹ <http://www.explorehealthcareers.org/en/index.aspx>

² <http://www.bls.gov/oco/cg/cgs035.htm>

³ http://www.tcwf.org/news_archive/jan_27_06_pub_education.htm

⁴ <http://science.education.nih.gov/LifeWorks.nsf/alpha.htm>

⁵ <http://science.education.nih.gov/LifeWorks.nsf/Information/Preparing+for+College+-+Grade+8>

There are over 100 Health Careers to Choose From!

Ambulance Driver
Anesthesiologist
Anesthesiologist Assistant
Art Therapist
Athletic Trainer
Audiologist

Biochemist
Biological Technician
Biologist
Biology Teacher, Secondary
Biomedical Engineer
Biophysicist
Biostatistician
Blood Banking, Specialist
Cardiovascular Technician

Certified Coding Associate
Chemical Engineer
Chemical Technician
Chemist
Chiropractor
Clinical Pathologist
Clinical Psychologist
Coroner and Medical Examiner
Counselor, Mental Health
Counselor, Rehabilitation
Counselor, Substance Abuse
Cytotechnologist

Dental Assistant
Dental Hygienist
Dental Laboratory Technician
Dentist
Diagnostic Medical Sonographer
Dietetic Technician, Registered
Dietitian and Nutritionist

Electroneurodiagnostic Technologist
Embalmer
Emergency Medical Technician
Environmental Health Scientist
Environmental Science Technician
Epidemiologist
Family and General Physician
Fitness Trainer and Instructor
Forensic Science Technician

Genetic Counselor
Government Service Executive

Health and Medical Museum Curator
Health Educator
Health Information Administrator
Health Information Technician
Health Specialties Teacher
Hematologist
Histotechnician-Technologist
Home Health Aide

Immunologist
Industrial Production Manager
Internist

Kinesiotherapist

Medical and Laboratory Technician
Medical and Laboratory Technologist
Medical and Health Manager
Medical Appliance Technician
Medical Assistant
Medical Database Administrator
Medical Equipment Preparer
Medical Equipment Repairer
Medical Illustrator
Medical Librarian
Medical Library Technician
Medical Records Technician
Medical Sales Representative
Medical Scientist
Medical Secretary
Medical Transcriptionist
Meeting Planner and Manager
Microbiologist

Neurologist
Nuclear Medicine Technologist
Nurse, LPN/LVN
Nurse, Registered
Nursing Aide, Orderly, and Attendant
Nursing Instructor

Obstetrician and Gynecologist
Occupational Health and Safety
Occupational Therapist

Occupational Therapist Aide
Occupational Therapy Assistant
Ophthalmic Laboratory Technician
Optician
Optometrist
Oral and Maxillofacial Surgeon
Orthodontist
Orthopedic Surgeon
Orthotist and Prosthetist

Patent Lawyer
Pathologists' Assistant
Pediatrician
Personal and Home-Care Aide
Pharmacist
Pharmacy Aide
Pharmacy Technician
Physical Therapist
Physical Therapist Aide
Physical Therapist Assistant
Physician Assistant
Podiatrist
Prosthodontist
Psychiatric Aide
Psychiatric Technician
Psychiatrist
Public Relations Specialist

Radiation Therapist
Radiologic Technician
Radiologic Technologist
Recreation Studies Teacher
Recreational Therapist
Respiratory Therapist
Respiratory Therapy Technician

Science Writer
Social Worker, Child and Family
Social Worker, Medical
Social Worker, Mental Health
Speech-Language Pathologist
Surgeon
Surgical Technologist
Veterinarian
Veterinary Assistants
Veterinary Technician

Core Components

- Recruitment:** Recruitment activities are directed to students who have been identified by their teachers as having an interest in pursuing a career in the Healthcare Industry or are self-identified.
- Eligibility:** Students who are interested in the Medical Academy complete a single application, which includes a parent signature. They will also undergo an interview process for selection into the program.
- Selection:** Applications are screened with attention paid to GPA, completion of courses, and overall attendance. A personal interview is also conducted with consideration given to motivation, commitment to a health career, bilingual Spanish/English skills, parental support, and math and science placement.
- Curriculum:** Academic courses remain at the center of the program and are not watered down, but instead take on an “applied flavor.” Curriculum will have an “employability” component that covers such basic skills as: proper language and dress, career planning, and job search skills. Motivational activities enrich the curriculum through our community partnerships: guest speakers, field trips, mentoring, etc.
- Community Service:** Students have opportunity to experience healthcare through volunteering and community service activities. These experiences help students focus on a career that is most consistent with their personal goals.
- Mentors:** Mentors provide the one-on-one support needed by many students to successfully complete the coursework required to meet their educational career goals. The mentor role models appropriate healthcare professionalism and ethical behavior necessary for employees in the industry.
- Job Shadowing:** Job Shadowing / Internships are designed to provide meaningful experiences in exploring health occupations. Students will be introduced to the world of work and the process of career exploration at an actual work site. This component allows the student to make a more informed decision regarding which careers to explore further.

Frequently Asked Questions

1) Who should apply for the Medical Academy?

Students who think they might want to go into a medical career. They might not know for certain that they do, but have an interest and want to learn more to make a more informed decision.

2) Is the Medical Academy only for students who want to be doctors?

No. This program is for students interested in any of the over 350 health careers (like dentistry, veterinary, physical therapy, nursing, radiology, surgical technology, medical assisting, etc.).

3) What are some of the special opportunities for the Medical Academy Students?

Field Trips, job shadowing, paid and unpaid internships, summer programs, college visits, guest speakers, mentors, etc.

4) Do I have to stay in the Medical Academy if it is not a good match for me?

No. You can leave the program at the end of the school year.

5) How do I join the Medical Academy?

Complete an application and return it to your counselor or teacher before the end of the school year (in preparation for the following school year).

Your school information / LOGO here

Community Partners Wanted

There is a critical need for a more diverse healthcare workforce!



Some local high schools have developed a Medical Academy model to engage minority students to pursue careers in healthcare.

These academies, which are a “school within a school,” provide both the academic skills to ensure success and the career exposure and mentoring opportunities to enable students to envision themselves as future healthcare professionals.

If you are a:

- Hospital
- Clinic
- Ancillary Health Provider
- College / University
- Healthcare Trade School

We urge you to
“Adopt a Medical Academy”
at a local High School.

What’s Needed:

- Internships
- Job Shadows
- Mentors
- Hospital Tours
- Guest Speakers
- Inspiration for students to pursue health careers

Benefits of Involvement:

- Community Service Hours
- Recognition on the SDSA (LHSCC) web page
- Positive Public Relations / Enhanced Name Recognition
- Making a Difference
- Developing relationships with potential future staff
- Responding to the need for minority health workers

Any assistance you could provide would be welcomed and appreciated. For more information about how to work with our school, contact:

Your school contact information

Your High School LOGO
here.

Your Medical Academy / Counselor Contact Information Here.

Medical Academy Students Wanted

Have you considered a career in healthcare?

Facts about Healthcare Jobs

- Healthcare will be one of the fastest-growing industries over the next decade.
- Bilingual and minority students and healthcare workers are in very high demand.
- Jobs that are the most in demand are also the ones that usually see the highest growth in income.
- There are over 200 different jobs in healthcare ranging from doctor to pharmacy technician.

Why Should I Choose a Health Career?

- Well paying healthcare careers are available for all levels of education.
- Attain skills that are in high demand.
- Make a difference and provide better access to health care to those who need it in the community.
- Health professionals work in many different places, including: hospitals, clinics, nursing homes, mental health facilities, government agencies, universities, pharmaceutical industries, etc.



If you think you might like to learn more about a career in healthcare, sign up for our Medical Academy.

Insert how to get more information /
apply for program here.

Frequently Asked Questions

1) Who should apply for the Medical Academy?

Students who think they might want to go into a medical career. They might not know for certain that they do, but have an interest and want to learn more to make a more informed decision.

2) Is the Medical Academy only for students who want to be doctors?

No. This program is for students interested in any of the over 350 health careers (like dentistry, veterinary, physical therapy, nursing, radiology, surgical technology, medical assisting, etc.).

3) What are some of the special opportunities for the Medical Academy Students?

Field Trips, job shadowing, paid and unpaid internships, summer programs, college visits, guest speakers, mentors, etc.

4) Do I have to stay in the Medical Academy if it is not a good match for me?

No. You can leave the program at the end of the school year.

5) How do I join the Medical Academy?

Complete an application and return it to your counselor or teacher before the end of the school year (in preparation for the following school year).

Your High School LOGO
here.

Your Medical Academy / Counselor Contact Information Here.

Se Buscan Estudiantes para la Academia de Medicina

Haz considerado una carrera en cuidados de salud?

Hechos sobre Empleos de Cuidados de Salud

- Cuidados de salud será la industria con mayor crecimiento durante la próxima década.
- Los estudiantes bilingües y minoritarios y trabajadores de cuidados de salud tienen una gran demanda.
- Los empleos que tienen mayor demanda son también los que normalmente ven el crecimiento más alto en ingresos.
- Hay más de 200 empleos distintos en cuidados de salud, desde doctor hasta técnico farmacéutico.

Porque debería escoger una carrera en cuidados de salud?

- Carreras bien pagadas de cuidados de salud hay disponibles en todos los niveles de educación.
- Obtienes habilidades que tienen mucha demanda.
- Haces una diferencia y proporcionas mejor acceso a cuidados de salud para aquellos que lo necesitan en la comunidad.
- Los profesionales de salud trabajan en muchos lugares diferentes, incluyendo: hospitales, clínicas, asilos, Instituciones de Salud Mental, agencias de gobierno, universidades, industrias farmacéutica, etc.

Si tú crees que te gustaría aprender más sobre carreras en cuidados de salud, apúntate para nuestra Academia de Medicina.

Insert how to get more information /
apply for program here.



Preguntas mas frecuentes

1. Quién debe aplicar para la Academia de Medicina?

Los estudiantes que piensan que a lo mejor quisieran entrar a una carrera de medicina. Ellos a lo mejor no están seguros que lo harán, pero tienen interés y quieren aprender más para tomar una decisión más informada.

2. Es la Academia de Medicina solo para estudiantes que quieren ser doctores?

No. Este programa es para estudiantes interesados en cualquiera de las más de 350 carreras de salud (como odontología, veterinaria, terapia física, enfermería, radiología, tecnología quirúrgica, ayudante de medicina, etc.)

3. Cuales son algunas de las oportunidades especiales para los estudiantes de la Academia de Medicina?

Excursiones, infinidad de empleos, internados pagados y no pagados, programas de verano, visitas a universidades, conferencias, mentores, etc.

4. Tengo que quedarme en la Academia de Medicina si no es una buena opción para mí?

No. Puedes abandonar el programa al final del año escolar.

5. Como puedo unirme a la Academia de Medicina?

Llena una aplicación y regístrala a tu consejero o maestro antes del final del año escolar (en preparación para el próximo año escolar.)

Your school LOGO & Information Here

Parents - Help Your Child Succeed *in a High School Medical Academy and prepare for college*

What Does a Medical Academy Offer My Child?

- A “school within a school” approach, which provides instruction with a health career flavor. Curriculum will have an “employability” component that covers such basic skills as: proper language and dress, career planning, and job search skills.
- Hands-on learning opportunities, exposure to a variety of career choices in health care, field trips, job shadowing, paid and unpaid internships, summer programs, college visits, guest speakers, mentors. etc.



What are the academic requirements and how can I afford education for my child?

- Students must complete high school education, either a diploma or GED.
- Students will need to get national test scores that are acceptable to the program they want to enter.
- They should take as many math and sciences classes as they can.
- Encourage your child to talk to teachers, role models, and healthcare professionals about careers.
- The cost of education depends on the profession and program your child chooses.
- There are many sources for scholarships, loans, and grants, including:
 - ✓ Federal, State and local government financial aid programs
 - ✓ Companies, including businesses in your neighborhood and financial institutions
 - ✓ Professional associations, community and national organizations and social groups
 - ✓ Hospitals, clinics, and other health care facilities

How can I help my child prepare for college?

- Help your child with homework and meet with teachers and counselors to discuss coursework that will prepare your child for college.
- Talk to your children about careers that interest them and what college they would like to attend.
- Research financial aid, scholarships and Cal Grants. Consider opening a college savings account at ScholarShare.
- Contact the college campuses you are interested in to schedule a tour and get information about programs, admission requirements and financial aid.
- Get involved. Visit the Parent Institute for Quality Education to see if there are other ways to help your child:
<http://www.piqe.org/Assets/San%20Diego/SanDiegooffice.htm>

Your school LOGO & Information Here

Padres de Familia – Ayuda a Tu Hijo a Triunfar

En una Academia de Medicina en Preparatoria y prepararse para la universidad

Que Ofrece una Academia de Medicina a mi hijo?

- Acceso a una “escuela dentro de una escuela” la cual proporciona formación con un sabor a carrera de salud. El currículum tendrá un componente de capacidad de emplear que cubre habilidades básicas tales como: lenguaje apropiado y vestido, planeación de carrera y habilidad para buscar empleo.
- Disponibilidad de oportunidades de aprendizaje, exposición a una variedad de opciones de carrera en cuidados de salud, excursiones, infinidad de empleos, internados pagados y no pagados, programas de verano y visitas a universidades.



Cuales son los requisitos académicos y como puedo pagar por la educación de mi hijo?

- Los estudiantes deben terminar la educación preparatoria, ya sea diploma o GED.
- Los estudiantes necesitarán obtener puntuaciones aceptables en los exámenes nacionales para el programa al que desean entrar.
- Ellos deben tomar todas las clases de matemáticas y ciencias posibles.
- Animen a sus hijos a platicar con nuestros maestros, personas modelo, y profesionales de cuidados de salud sobre carreras.
- El costo de la educación depende de la profesión y programa que su hijo escoja.
- Hay muchas fuentes de becas y préstamos, incluyendo:
 - Programas de ayuda financiera de Gobierno Federal, Estatal y local.
 - Compañías, incluyendo negocios en su vecindario e instituciones financieras
 - Asociaciones profesionales, organizaciones comunitarias y nacionales y Grupos sociales.
 - Hospitales, clínicas y otras instalaciones de cuidados de salud.

Como puedo ayudar a mi hijo a prepararse para la universidad?

- Ayude a su hijo con sus tareas y reúnase con sus maestros y consejeros para platicar sobre el curso de trabajo que preparará a su hijo para la universidad.
- Hable con su hijo sobre carreras que le interesen a el/ella y a que universidad le gustaría asistir.
- Investiguen sobre ayuda financiera, becas y préstamos. Consideren abrir una cuenta de ahorros para la universidad en ScholarShare.
- Contacten las universidades que les interesen para programar un tour y obtener información sobre programas, requisitos de admisión y ayuda financiera.
- Involúcrese. Visite el Instituto de Padres para Educación de Calidad para ver otras formas de ayudar a su hijo: <http://www.piqe.org/Assets/San%20Diego/SanDiegooffice.htm>

**Latino Health and Science
Career Connections**
A program of SDSA

The following are suggested activities to enhance your medical academies, as shared by directors of the Medical Academies at Mt. Miguel, Oceanside, and Southwest High School:

Parent Communication / Student Recruitment:

- Have a Mandatory Parent Information Night for the Medical Academy (separate from the back-to-school night)
- Provide Medical Academy information at Freshman orientation activities
- Establish a “Parent Institute” and/or a “Parent Committee” to increase communication and disseminate information regarding the school’s resources (increases awareness of rights, responsibilities, and parenting resources).
- Have Medical Academy students visit all English classes to present Academy information and recruit students.
- Host annual health career fair, in which Academy students provide mini-physicals (Height, weight, blood pressure screenings) and engage in peer-recruiting activities.

Academy Activities:

- Host blood-drives in which academy students work with American Red Cross to prep donors.
- Establish partnerships with the military for: health fair with a “Mash Unit” theme; health programs; job shadows; speakers, etc.
- Establish partnerships with local healthcare organizations to secure: mentors, job shadows, ride-alongs, surgical viewing, participation in targeted programs (Red Shirt program at PPH, Camp Scripps, etc.)

Continuing Education Activities:

- Establish relationships with local colleges and work to align/articulate classes for college credit where possible.
- Provide students opportunity to meet with counselor to discuss career goals and determine path to achievement.

California State University (CSU) Schools:

- Bakersfield
- Channel Islands
- Chico
- Dominguez Hills
- East Bay
- Fresno
- Fullerton
- Humboldt
- Long Beach
- Los Angeles
- Maritime
- Monterey Bay
- Northridge
- Pomona
- Sacramento
- San Bernardino
- San Diego
- San Francisco
- San Jose
- San Luis Obispo
- San Marcos
- Sonoma
- Stanislaus

State College Requirements:

History and Social Science.....	2 years
English	4 years
Mathematics.....	3 years
Laboratory Science.....	2 years
Second Language	2 years
Visual and Performing Arts.....	1 year
Electives.....	1 year

Other requirements: Pass the CAHSEE, SAT 1 or ACT or GPA of 3.0 or higher regardless of test scores.

University of California (UC) Schools:

- UC Berkeley
- UC Davis
- UC Irvine
- UC Los Angeles
- UC Merced
- UC Riverside
- UC San Diego
- UC San Francisco
- UC Santa Barbara
- UC Santa Cruz

University of California Requirements:

History and Social Science.....	2 years
English	4 years
Mathematics.....	3 years
Laboratory Science.....	2 years
Second Language	2 years
Visual and Performing Arts.....	1 year
Electives.....	1 year

Other requirements: Pass the CAHSEE, SAT I or ACT, SAT II, or GPA of 3.3 or higher regardless of test scores. Will not be accepted with a GPA below 2.82.

Nursing Programs in Southern California:

Certified Nursing Assistant Programs: Southwestern College; Maric College; Golden Health Careers Academy; Mira Costa College

Licensed Vocational Nurse Programs: Southwestern College; Grossmont College; Maric College; Mira Costa College

Registered Nurse Programs: Southwestern College; San Diego City College; Grossmont College; Palomar College; Maric College; Pt. Loma; San Diego State

Nurse Practitioner Programs: University of San Diego (USD); University of California San Diego (UCSD)

Physician Assistant Programs in Southern California: Charles R. Drew University of Medicine and Science (Los Angeles); Western University of Health Sciences (Pomona).

Medical Schools in California: First you must get a Bachelor's Degree and pass the MCAT, then you can apply to medical schools like:

- Loma Linda University
- UC Davis
- UC San Diego
- Stanford University
- UC Irvine
- UC San Francisco
- Touro University International
- UC Los Angeles
- University of Southern California
- Western University of Health Sciences College of Osteopathic Medicine

Pharmacy Schools in California: UC San Diego; University of Southern California; Western University of Health Sciences (Pomona); UC San Francisco; Academy of Western Careers (La Mesa); California College of Health Sciences (National City); Pima Medical Institute (Chula Vista); United Education Institute.

Behavioral Health Programs: San Diego State University (SDSU); UC San Diego (UCSD); University of San Diego (USD); Alliant International University; National University.

Dietician Programs: San Diego State University (SDSU)

EMT (Emergency Medical Technician) Programs: Southwestern College; Miramar College; Palomar College.

Therapist Programs:

Occupational Therapy: Loma Linda University; CSU - Dominguez Hills

Physical Therapy: CSU Long Beach ; CSU Northridge; Loma Linda University

Speech Therapy: San Diego State University

Technician Programs:

Cardiovascular Tech: Grossmont College

Radiology Tech: Mesa College; Pima Medical Institute

Ultrasound Tech: University of California, San Diego

Scholarship Information

Most scholarships are for Seniors, however the work put in to get a scholarship starts in 9th grade.

Ways to get started:

1. Start doing community service activities. It's great exposure to different fields, you'll make friends and feel good about yourself.
2. Start researching what kinds of scholarships are available in your area. Many scholarships go unclaimed or are given to the only person who applied because not enough people apply.
3. Join extracurricular activities (like school sports teams, band, art or math clubs) so your talents can be showcased to university scouts, you can win awards, and you gain leadership and team-building skills.
4. Find a mentor (someone who has done what you want to accomplish). They, and other adults, can write a recommendation letters for your scholarship applications.
5. Develop your "story." What have you overcome while pursuing your goal? Scholarship boards want to give their money to students who will reach their goal to give back to the community.
6. Research the scholarship programs at the college you plan to attend. By writing one essay and turning in 3 recommendation letters (and your transcripts), you will be applying to many scholarships at once.

7. Keep your grades up! Go to tutorials, retake classes, go to summer school, take college courses when you are sixteen, and honors and advanced-placement (AP) classes when you are a Junior.

Sample Scholarship for SDSU: The President's Diversity Scholarship: \$3500 per year, up to 4 years.
Requirements: Overall GPA of 3.0 and a commitment to community leadership.

Format for Scholarship Essays:

1. Begin with a quote or a story to entice the reader to read further. Remember that scholarship board members have to read many essays and if yours sounds like everyone else's, you won't win a scholarship. Make it interesting and relevant, with a theme.
2. Describe your career goal, how long you've known that is what you want to do, how it will help others, and who have been your mentors along the way.
3. Mention hardships you've overcome. Don't start a laundry list of "poor me" items, but mention how you have prospered academically despite the lack of resources. Perhaps your goal ties into giving back to others just like you in the future.
4. Describe the activities you have done to pursue your goal. Sometimes there is a connection to your goal you cannot initially see. For example, teaching swimming lessons ties into the goal of later becoming a teacher. Be convincing that you "will" reach your goal, not that you "hope to" or "might."
5. End on a positive note and tie it all back into the theme of your essay.

Utilize Summer Training Opportunities:

For Example

- H.E.S.I. (Health Careers Exploration Summer Institute): Available to students in the Grossmont Union High School District.
- Life-Sciences Summer Institute: Tour Biotech companies and research institutions to learn more about San Diego's Biotech Industry.

College grads earn about twice the income of those who never attended college.

What colleges look at (in order of importance)*:

1. GPA / difficulty of curriculum
2. SAT, ACT, and SAT Subject Test scores
3. Class Rank
4. Application essays
5. Extracurricular activities
6. Recommendations
7. Interviews
8. Intangibles

**Resource- PrincetonReview.com*

Sample Forms

Application Letter

Your Letterhead

Date

Dear Student,

Thank you for your interest in our Medical Academy. Enclosed is an application for you to complete to be considered for this opportunity. Please read it carefully and complete it only if you are ready to commit to this exciting, but rigorous program.

Participation in our Academy will provide you with hands-on learning opportunities that will enhance your educational experience and better prepare you for pursuit of your career goals in health care.

The deadline for submitting your application is _____.

Please send it to: _____ or drop it off at the front office of our high school.

I look forward to reviewing your application and will be scheduling interviews in May and June. Selections for the _____ school year will be announced by _____.

Sincerely,

Your LOGO here

_____ High School
**Medical Academy
Program Application**

Return to:
Your Contact Info Here
By the deadline _____

Last Name

First Name

Grade

ID Number

Address

Home Phone

City, State, Zip Code

Email Address

Sex: M F

Eligible for Free/Reduced Lunch: Y N

Ethnicity: (Check One)

<input type="checkbox"/>	American Indian / Alaska Native	<input type="checkbox"/>	Asian
<input type="checkbox"/>	Pacific Islander	<input type="checkbox"/>	Filipino
<input type="checkbox"/>	Hispanic / Latino	<input type="checkbox"/>	Black/African American
<input type="checkbox"/>	White (Not Hispanic)	<input type="checkbox"/>	Multiple or No Response

What was your GPA last year? _____

Have you taken any AP or Honors Courses? If so, please list: _____

What is your career Objective? (nurse, dentist, athletic trainer, etc): _____

Explain two or three activities, sports and/or interests you enjoy.

Discuss several reasons why you would like to participate in our Medical Academy. _____

Because there are more students signing up for the Academy than there is room, explain why you should be selected. (What can you bring to the Academy?)

Do you have a relative or close acquaintance who works in the healthcare field? If so, please identify what area of healthcare and their relationship to you.

Have you participated in community service (volunteered anywhere)? If so, explain what you did and estimate the total number of hours you volunteered.

Participation Agreement:

Please initial under the "Yes" column if you agree with the statement, then sign and date below.

I have:

YES

1. A strong interest in pursuing a career in the medical and/or health fields.

2. A commitment to tackle rigorous science courses and conduct research.

3. An interest in developing my skills in scientific writing and reading, conducting research and investigations, making presentations and using technology.

4. A willingness to work in teams and participate in team and individual seminar presentations to parents, students, and the community.

5. A commitment to complete the required community service hours outside of class.

6. A commitment to maintain good attendance, exhibit good behavior at all times, dress professionally as appropriate, complete Academy assignments *with best effort* and maintain a C or better in Academy Courses.

"I know that failure to meet the above six commitments in full may result in being exited from the Academy."

Name (please print)

Signature

Date

Parent Signature

Date

Student Interview

- 1) What are your future goals?
- 2) How do you think this program will help you achieve your goal(s)?
- 3) Do you want to attend college?
- 4) Has anyone in your family attended college?
- 5) Do you know anyone who currently works in healthcare?
- 6) What are your hobbies or interests?
- 7) What do you feel is your greatest Strength?
- 8) In a project which requires you to work with a partner, how would you handle it if you felt you were having to do more of the work?
- 9) How do you feel about doing community service / volunteer hours outside of your regular school day?
- 10) Are you comfortable making presentations or speaking in front of a group?

Your School Information / LOGO here

Student /Parent Contract

Student Name: _____ **Date:** _____

Upon enrollment in the _____ Medical Academy, you are in agreement with and will commit to the following standards:

Academic Performance

It is expected that students in the Academy maintain at least a grade of C or better. Students are expected to dedicate adequate time and effort to successfully complete all assignments and should to seek out assistance in courses in which they perceive a need for help.

Attendance

Attendance at school is always imperative. In the academy, punctuality and attendance is even more important because of the commitment of our industry partners and community to educate future workers and professionals. It is expected that Academy students will have exemplary attendance. Failure to adhere to this standard will result in school and Academy consequences.

Professional Behavior and Attitude

Since we frequently interface with the healthcare community, it is important that behavior and attitude reflect knowledge about our specific pathway. It is pertinent to have behaviors that respect the rules and regulations of the industry; a professional demeanor, a professional appearance; and an attitude of enthusiasm and seriousness regarding school, the Academy program, and each student's goals.

I agree to commit to the above standards.

Student Signature

Date

I agree to support my child in meeting the above standards.

Parent / Guardian Signature

Date

Academy Team Representative

Date

Your School Info / LOGO Here

Emergency Notification

Last Name

First Name

Date

Date of Birth

Social Security Number

Address

Work Phone

Home Phone

Other Phone

Medical Academy Room Number

Teacher

In the event an emergency, illness, or injury occurs while at school or at a school-related function, please contact:

Parent/Guardian: _____ Phone: _____

Work Phone: _____ Other Contact Phone: _____

Parent/Guardian: _____ Phone: _____

Work Phone: _____ Other Contact Phone: _____

Other Contact: _____ Phone: _____

Relation to Student: _____ Other Contact Phone: _____

Work Phone: _____

Are the persons to contact able to speak English? (circle one) YES NO

If they are not able to speak English, what language do they speak? _____

In case of serious emergency and we cannot reach you or one of your contacts, please provide the name of your physician or hospital you want us to call:

Physician: _____ Phone: _____

Hospital: _____ Phone: _____

Student Medical History / Treatment Authorization

MEDICAL HISTORY:

Student's Last Name	Student's First Name	Date
Student's Date of Birth	Doctor Name	Doctor Phone Number

Current Medications (please list): _____

Allergies to Medication or other: _____

Does student have a history of:

_____ Rheumatic Fever	_____ Heart Trouble	_____ Epilepsy
_____ Kidney Disease	_____ Congenital Defects	_____ Tuberculosis
_____ Asthma	_____ Diabetes	_____ Urinary Problems

Additional Information: _____

Is the student's immunizations current?
(please include proof of immunization with this form) YES NO

Has the student ever had a positive TB test?
(a current TB test is required for participation) YES NO

TREATMENT AUTHORIZATION:

In the event that your son/daughter is injured while in attendance of one of our programs, every effort will be made to contact you. If we are unable to reach you, or any of the other designated emergency contacts, we ask that you provide authorization for treatment as needed.

Should it be necessary for my child to have medical treatment while participating in the _____ High School Medical Academy, I hereby give the school district personnel permission to use their judgment in obtaining medical services for my child. I also give permission to the physician selected by the school district personnel to render medical treatment deemed necessary and appropriate by the physician. Permission is also granted to release emergency contact and medical history information to an off-campus training site of my son/daughter.

Parent/Guardian's Printed Name	Relationship to Student
--------------------------------	-------------------------

Parent/Guardian's Signature

Daytime Phone	Home Phone	Alternate Phone
---------------	------------	-----------------

Contact Person <i>(other than parent/guardian)</i>	Relation to Student	Phone Number
--	---------------------	--------------

Your School Info / LOGO here

Dear Parent or Guardian:

Your child has enrolled in the Medical Academy at _____ High School. Below is a listing of activities, which require your permission. Please sign each item to ensure your child can fully participate in the program.

Student Name: _____

Travel:

Some of the academy's learning activities will take place off campus. We need your permission to allow your child to walk, drive or be transported by bus or adult driver to these activities.

Field Trips/ Off Campus Transport Permission: _____
Parent Signature

Ride-Alongs:

Your permission is required for your child to participate in ride-alongs with select healthcare personnel (firefighters, emergency medical technicians/paramedics, lifeguards, etc.).

Ride-along permission: _____
Parent Signature

Blood Draws and Injections:

Lastly, some students will have the opportunity to participate in blood draws and injections. Please indicate your approval by signing the corresponding authorization.

Blood Draws _____
Parent Signature

Injections _____
Parent Signature

Date: _____

If you have any questions or would like more information, please contact:

Your contact information HERE

Additional Web Resources

Healthcare

<http://www.bls.gov/oco/cg/cgs035.htm>

http://www.edgateway.net/pub/sdsa_docs/programs/lhsc.html (Promising Practices Report)

Diversity

http://www.tcdf.org/health_issues/diversity_in_health.htm

http://www.tcdf.org/news_archive/jan_27_06_pub_education.htm

<http://www.dhs.ca.gov/director/omh/html/related.htm>

<http://www.rwjf.org/pr/topic.jsp?topicid=1180>

<http://meded.ucsd.edu/asa/dcp/>

Medical Academy Resources

Red Shirt program information

<http://www.copepartners.org/services/hwt/Red%20Shirt%20Program/index.html>

Presentation for Parents

<http://bhpr.hrsa.gov/kidscareers/parents.htm>

Links to Partners in Education Resources

<http://www.castategearup.org/sponsors/partners-sponsors.htm>

<http://www.nchste.org/>

College / Career Information

Overview of career choices and/or schools

<http://www.makeitinscrubs.com/index.asp>

<http://www.explorehealthcareers.org/en/Fields.aspx>

<http://science.education.nih.gov/LifeWorks.nsf/alpha.htm>

http://www.choosenursing.com/hs_students/index.html

<http://www.texasotjobs.org/> (detailed info on health-related jobs)

<http://science.education.nih.gov/LifeWorks>

<http://www.ama-assn.org/ama/pub/category/10481.html>

<http://www.healthcareers.com/>

http://www.workforce.org/generate/html/LMI/lmi_youth.html

<http://www.healthoccupations.org/rhorc/10/>

College Preparation Activities and Suggestions

<http://science.education.nih.gov/LifeWorks.nsf/Information/Preparing+for+College++Grade+9>

<http://mapping-your-future.org/MHSS/>

<http://www.calstate.edu/college/students.shtml>

<http://www.aie.org/MiddleSchool/Planning/index.cfm>

Scholarship / College Funding Resources

<http://bhpr.hrsa.gov/kidscareers/appendixC.htm>
<http://www.explorehealthcareers.org/en/Page.PayingForSchool.aspx>
<http://www.finaid.org/>
<http://going2college.org/StateResources/>
<http://mapping-your-future.org/paying/>
<http://www.csac.ca.gov/doc.asp?ID=20>
<http://studentaid.ed.gov/PORTALSWebApp/students/english/index.jsp>
<http://www.aie.org/MiddleSchool/Paying/index.cfm>
<http://www.aie.org/MiddleSchool/Scholarships/index.cfm>
<http://www.choosenursing.com/paying/financialaid.html>

Parent Resources

<http://www.piqe.org/Assets/San%20Diego/SanDiegooffice.htm>
<http://www.calstate.edu/college/families.shtml>
<http://www.schoolwisepress.com/index.html>
<http://www.castategearup.org/>