



The Powerhouse Science Center: Science, Technology, Engineering and Math Education

The Powerhouse Science Center will have a diverse range of educational exhibits and programs that will teach the fundamentals, and latest developments, in the fields of science, technology, engineering and math and will inspire the next generation of future innovators. Proficiency in the sciences will be a fundamental skill in the economy of the future and the Powerhouse Science Center is committed to using interactive and entertaining exhibits and programs to prepare the science literate community of tomorrow.

Field Trips and Teacher Aids

In a study conducted by the Lawrence Hall of Science, Berkeley, researchers found that 80% of K-5 teachers spend less than 60 minutes a week on science education, with 16% of teachers spending no time on science education. The current Discovery Museum is a popular destination for K-8 field trips with activities suitable for a variety of age ranges. The most popular field trip is a visit to the Challenger Learning Center.

Challenger Learning Center

One of the most visited attractions at the current Discovery Museum is the Challenger Learning Center, an interactive educational program created by the Challenger Center for Space Science Education, a non-profit organization founded after the Challenger Space Shuttle Disaster in 1986. Today there are more than 50 Challenger Learning Centers throughout the world, each with the mission of fostering the participants' interest in math, science, and technology. The Challenger Learning Center at the current Sacramento Discovery Museum ranks number one for attendance in California and is one of the most successful in the nation, both in terms of participation levels and revenue/expenses. In 2006-2007, 236 missions served 6,823 "crew members" — 5th-8th grade Northern California students.

An integral part of the experience is the pre-visit instruction provided to the teacher and the students. Each teacher is invited to attend a pre-visit training at the Center that provides preparatory multi-week NASA themed curriculum for students to complete before and after their visit. Teachers report noticeable improvements in their students' scientific understanding and their teamwork skills as a result of the synergy between the in-classroom training and the unique mission experience at the Challenger Learning Center.

At the Powerhouse Science Center the Challenger Learning Center will be upgraded and expanded to accommodate more students, new equipment, and new mission programs. With these enhancements the Challenger Learning Center will be able to keep pace with the changing scientific curriculum and provide more students with these services. Increased visits at the new Center will also allow the Museum to issue more scholarships to visiting schools and community groups, making the program accessible to all area schools.

The new exhibit space will also enable the development of new comprehensive programs based on the curriculum and visit method employed by the Challenger Learning Center. The Center will work to develop field trip programs on topics including: human biology and medical technology, the outer cosmos, resources and conservation, animal life, and archeological science. The potential for more programs is as diverse as our science exhibits.

Afterschool Programming

The Powerhouse Science Center will be located in the Riverfront District of Sacramento, a developing district near downtown Sacramento. The Center has begun work with First 5 Sacramento to develop a young child program and plans to develop additional afterschool and summer programming for youth from the Sacramento area, with a special interest in serving the surrounding low-moderate income community. The programs will be built around our strong permanent exhibits and our STEM education mission.



Innovative Exhibits

Experiential, hands-on exhibits encourage inquiry and make connections to current and future career opportunities in science and technology. Visitors will gain new insights about the world around them and beyond while investigating a variety of key concepts. A temporary exhibit space on the ground floor complements the four permanent exhibit collections: Exploring Ourselves, Exploring Our World, Exploring the Universe, and the Energy Machine.

Exploring Ourselves: Discover the secrets of systems, from cells to civilizations. An enormous sculpted human body anchors the gallery, providing a platform to explore cutting-edge medical technology and the fascinating realm of the mind. Complementary exhibits illustrate the history of human evolution and comparative anatomy.

Exploring Our World: Extreme Earth: Our planet is filled with an amazing array of life, from tiny sulphur-loving bacteria, to flamboyant rainforest parrots, and enormous plankton-eating whales. Explore the astounding adaptations that allow them to thrive in diverse and extreme environments, and find out more about the geology that influences it all.

Exploring Our World: Healthy Planet: Learn how everyone's efforts to reduce, reuse, and recycle can help preserve our natural resources, and discover how new and emerging technologies will make it possible for cars to run cleaner, buildings to be healthier, and energy to be produced more sustainably.

Exploring Our Universe: A real rocket entices visitors to the highest point of the building, where they can learn about planets, stars, comets, and more. Model satellites and telescopes highlight the latest discoveries about the universe, while a model of the solar system stretches out overhead.

The Challenger Learning Center (See description on previous page)

Planetarium

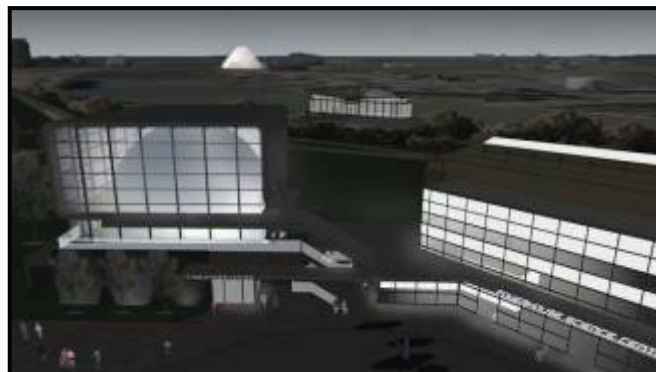
The Science Center will feature a new glass-encased glowing planetarium sphere, modeled after the Hayden Planetarium in New York City, with a new star machine and expanded capacity to hold our growing number of visitors. The planetarium, the only public planetarium in Sacramento, will be both an educational and architectural fixture in the Sacramento landscape, playing a role in all the Center's space themed learning programs.

Energy Machine: Simple machines and sophisticated technology combine to power a series of sculptures. Includes displays on the historic role of energy in Sacramento and the history of the PG&E Powerhouse.

Outdoor Exhibits: The outside of the Powerhouse Science Center will be just as dynamic as the inside. A "Rock and Rocket" garden gives visitors a chance to get up close and personal with Space and Earth Science, and an ecological water treatment system is as beautiful as it is functional.

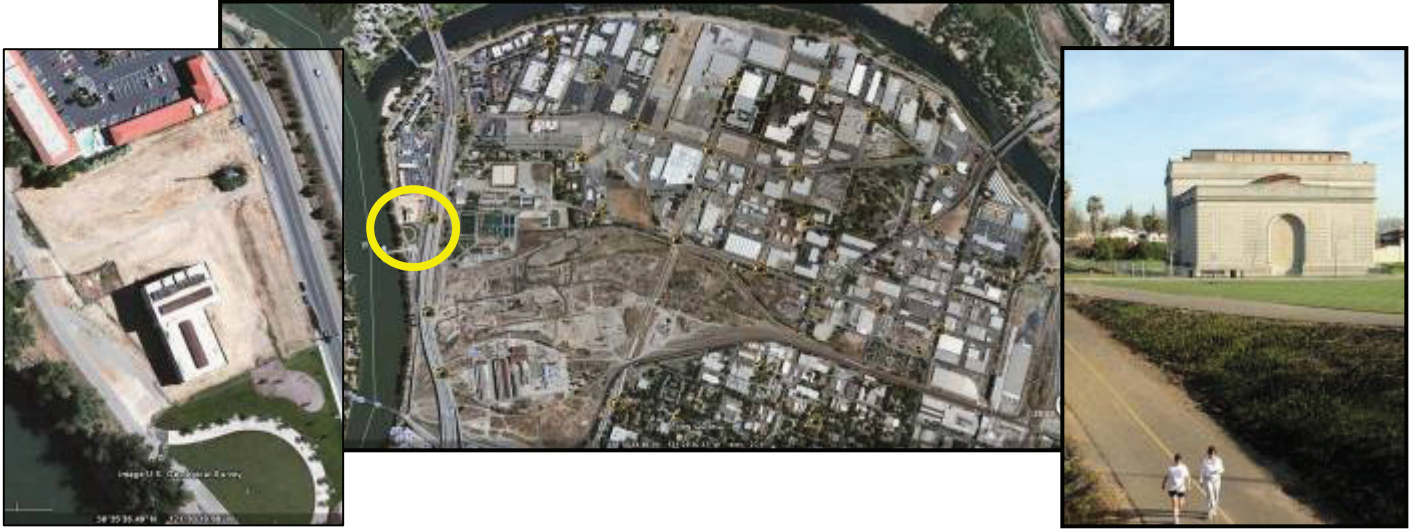
Special Events

The Powerhouse Science Center will have space to accommodate special events and visiting speakers, a service we envision as an integral part of our mission. The Center will become a public forum showcasing the latest in scientific discovery in a venue that is accessible for the whole family. These events will highlight the scientific achievements of the Sacramento region, the latest developments in medical science and technology, and the fundamentals of resource conservation.

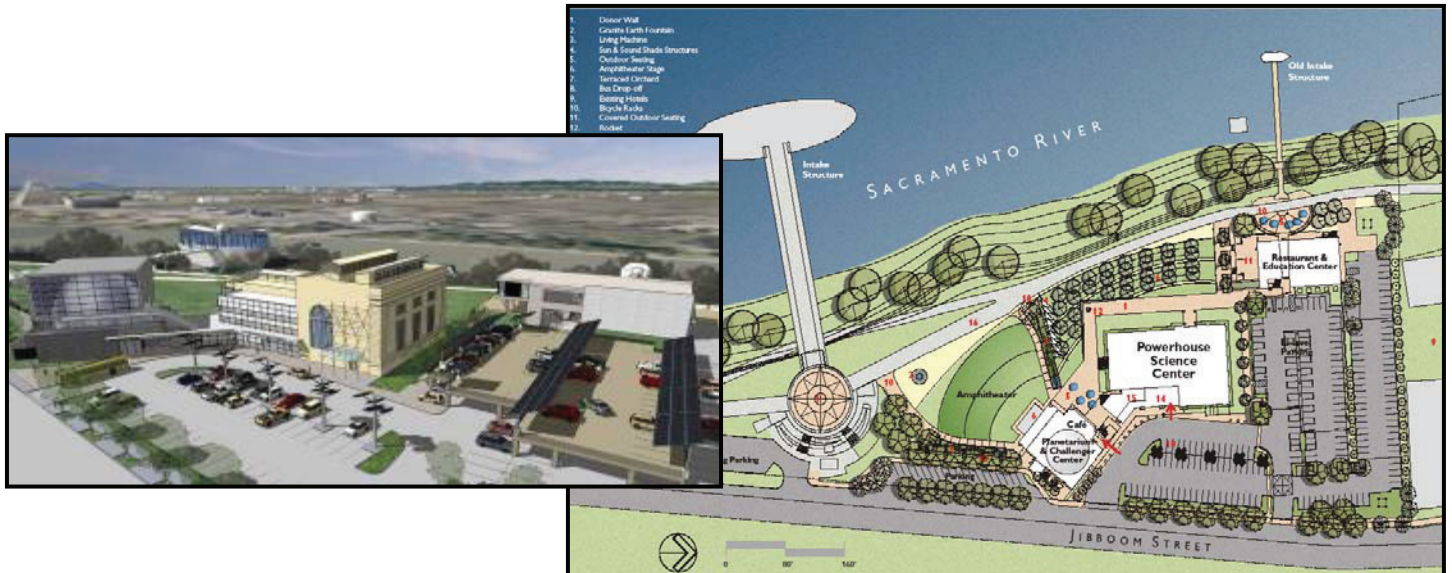




**The Powerhouse Science Center:
Transforming a Historic Site into a Cutting Edge Discovery Museum**



The Powerhouse Science Center will occupy the defunct PG&E Power Station B, a former power generating plant on the Sacramento River. The Power Station officially ceased operations in 1954 and has at various times been under the ownership of the Department of Transportation- for the construction of I-5- the Department of Parks and Recreation, and finally the City of Sacramento. In 2008 the Discovery Museum entered into a long-term lease agreement with the City of Sacramento for control of the property and rights to build their new home, the Powerhouse Science Center. The Powerhouse Science Center will preserve the original structure and architectural features of the Powerhouse Station in full accordance to its 1984 listing on the National Registrar of Historic Properties and the California Register of Historic Resources. In restoring and reusing this property the Powerhouse Science Center will embody the principles of brownfield reuse, transforming a former center of applied science and industry into a place that inspires the next generation of scientific innovators.



For more information on the Powerhouse Science Center please contact Michele Wong, Interim Executive Director, at (916) 853-0304 or michele.wong@synergex.com or Amanda Fenton with Townsend Public Affairs at (510) 835-9050 or afenton@townsendpa.com



The Powerhouse Science Center: Center of Scientific Learning, LEED Platinum Design

The Powerhouse transforms Downtown Sacramento's former PG&E Power Station into an innovative educational center, featuring a museum, planetarium, restaurant, and conference center. Green design will be incorporated in every project component. The Powerhouse will demonstrate that a historic structure can be adapted to meaningful and sustainable public use with a community oriented, long-term mission and Platinum-level LEED certified building design. Low impact new construction, reuse of existing materials and public buildings, and sustainable green practices for water, energy and resource efficiencies will embody the tenant of "green" architecture and will offer visitors a healthy environment in which to learn, play, and visit.



Solar panels on the parking and transit facility.

Energy: In addition to being a model green building, the museum will educate the public about the science of energy creation and the consequences of energy consumption. The goal is to provide a net-zero electricity building, and even sell surplus energy back to the grid through use of a hydrogen fuel cell that will provide power for the museum and its attendant structures and displays. The Science Center will also feature state-of-the-art mechanical and electrical systems designed to be at least 20% above California's rigorous Title 24 requirements. A photovoltaic array will cover the top deck of the parking structure, providing shade for vehicles and powering a large part of the building. Photovoltaic "trees" that will follow the sun to collect UV have been designed in the landscaping.



The Living Machine, a nature based water filtration system

Water: Wastewater will be treated with two Living Machines, an ecological wastewater treatment system that mimics processes found in wetland environments. An exhibit on the Living Machine will be included in the Healthy Planet exhibit gallery. An extensive storm water management plan will be developed that will capture and reuse this water for non-potable uses such as landscape irrigation and toilet flushing. No potable water will be used to irrigate the landscape and all fixtures will be water efficient.



Healthy Planet exhibit and café, using produce from the organic garden

Reuse: An on-site recycling center will facilitate the reduction of waste generated by the building that must be hauled to and disposed of in landfills. Teaching pocket gardens and water features will demonstrate uses for "grey water" and organic gardening methods.

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River District Redevelopment Area





The Powerhouse Science Center: Steering Committee

Michele Wong

Co-Chair
President and CEO
Synergex International
Corporation

The Honorable Kevin Johnson

Mayor
City of Sacramento

Dr. Melissa Brown

Executive Director
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Celeste Chin

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Wife, Mother, and Community
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*Vice President, Senior
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Debora Fee

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Commercial Real Estate
Snyder Commercial Real
Estate

Judy D'Amico

*Director, State and
Government Relations*
Project Lead the Way

Rebekah Donaldson

President/CEO
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Catherine Moulton

Johan Otto

President
Carson Development

Tim Ray

AT&T Foundation

Beth Callahan, Staff

*Director of Development and
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*Capital Campaign
Coordinator*
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The Powerhouse Science Center: Funding Strategy

The Powerhouse Science Center will be a landmark attraction for the Sacramento Region, teaching visitors the fundamentals of scientific principles while exploring the cutting edge science of today in an engaging, interactive, hands-on setting. Housed in the former PG&E powerhouse, surrounded by natural parklands and adjacent to the Sacramento River, the new site is an ideal location for inspiring the quest for all types of scientific knowledge. As a cornerstone of the River District development the Powerhouse Science Center will create economic activity and spur development in a currently underused area of Sacramento, attracting over 200,000 visitors (including 120,000 students) to the River District and downtown.

The Powerhouse Science Center is a bold investment in the economic and educational future of our community. At a total cost of just over \$50 million, Powerhouse Science Center is looking at several sources of public and private funding to finance the construction of this community resource.

Private Funding Campaign

The Powerhouse Science Center has a goal to raise \$20,000,000 through private sources. The successful ‘Founding Partners’ campaign has already received significant commitments from: The City of Sacramento, the County of Sacramento, Aerojet, Allergy Systems, Armour Steel, Carson Development, Drexel University, Dreyfus & Blackford, Kenneth E. Fait, Mr. John and Dr. Mary Finegan, Hewlett-Packard Company, Intel, Morgan Family Foundation, Nehemiah Community Foundation, Otto Construction, Pacific Gas and Electric, Sacramento Convention and Visitors Bureau, Social Venture Partners Sacramento, Synergex International Corporation, Townsend Public Affairs, and Wells Fargo Bank. The Founding Partners campaign continues to bring in new partners and contributions each week. The Powerhouse has also applied for Historic Tax Credits, a low-interest loan through the New Market Tax Credit program and is in negotiations with a private company for a very significant naming rights contribution.

Public Funding: 30 Initiative

The Powerhouse Science Center is looking beyond traditional private sector fundraising to a variety of public sector funding opportunities. The Powerhouse Science Center will be a resource for the entire community with enriching activities for students, parents, educators, and young children. With the diverse range of facilities and programs the Powerhouse Science Center has unveiled the bold “30 Initiative” to raise \$30 million from public funding sources*.

30 Initiative

Federal		State		Local	
Economic Development Administration: Economic Development Program	\$3,000,000	Proposition 84: Nature Education Center	\$7,000,000	Sacramento Redevelopment Agency: Redevelopment	\$5,000,000
Environmental Protection Agency: Brownfield Redevelopment	\$2,000,000	Proposition 84: Statewide Parks Act	\$3,000,000	County of Sacramento: Redevelopment	\$2,000,000
Save America’s Treasures: Appropriation or Grant	\$1,000,000	Water Education Center	\$2,000,000	City of Sacramento: DOE Energy Efficiency Block Grant	\$1,000,000
NASA Educational Program: Appropriation or Grant	\$1,000,000			Community Development Block Grant	\$1,000,000
National Science Foundation: Appropriation or Grant	\$1,000,000			First 5 Sacramento: Capital and Program Support	\$1,000,000
Total Federal	\$8,000,000	Total State	\$12,000,000	Total Local	\$10,000,000

Total Public Sector: \$30,000,000	Total Private Sector: \$20,000,000	Total Project Cost: \$50,000,000
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* All sources listed are potential sources of funding that have been identified and are subject to change