

November 2005 - February 2006
Number 56

*Creating innovators of the future
 through inventions of the past*

Trains For The Holidays ...



If you had fun with last year's LEGO® holiday exhibit, you're in for another treat this year. The Livermore Learning Center features two holiday train exhibits this year, so mark your calendars to come enjoy the fun twice this holiday season.

On Saturday, December 3, members of "The Short Line" modular railway group of the Bay Area Garden Railway Society (BAGRS),



www.bagrs.org, will be running their double-track main line layout of garden gauge trains to fill the Learning Center, and members will be there to answer questions. This exhibit will run through Saturday, December 17, and will include some holiday surprises.

On Sunday, December 18, the Bay Area LEGO® Users Group (BayLUG), www.baylug.org, will once again entertain us with their intricate and detailed LEGO® train layout.



There will be many changes from last year's presentation, but you're sure to be thrilled with the operating trains and Bay Area icons.



Bring the family and friends, come join the fun during the holidays, and see both of the operating train layouts.

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From Our President

Robert H. Katzive



Happy 15th Birthday, MOAH

It was 15 years ago, September 20, 1990, when the Museum of American Heritage first opened its doors to the public. At that time, the Museum was located in leased quarters at 275 Alma Street. This year MOAH celebrates 15 years of service to Palo Alto and the Mid-Peninsula community at its current location in the historic Williams House and Gardens.

In the interval between opening day and now, much has changed, yet much remains constant. From its inception, MOAH has been operated by dedicated volunteers. Today, we have salaried administrative staff, but volunteers sustain the heart and soul of the Museum, creating exhibits, guiding visitors, conducting classes, planning events, providing accounting, membership and information technology services, maintaining our historic facilities and garden, managing our collection of artifacts and, not least, raising the funds that keep us operating. Many of our volunteers have been associated with MOAH since our 1990 opening.

Fifteen years ago, no one knew who we were. Today our presence is recognized throughout Silicon Valley and, through our website, around the world. Happy 15th Birthday wishes to MOAH and to all of us – the volunteers, members, supporters, staff, board members, visitors and advisors – who have created a valuable and wonderful community asset.

We are thrilled that Leonard and Shirley Ely will serve as honorary chairs for MOAH's anniversary celebration on Thursday, December 1, 2005 from 5:00 to 8:00 PM. We will have much to celebrate, so please save the date and look for your invitation in the mail.

Launching a task force

Many of you are aware that MOAH has been working with the Alumni Consulting Team (ACT) of the Stanford University School of Business, exploring ways to improve services to the community while strengthening our financial position. After discussions with the consulting team and review by the MOAH Board of Directors and Community Advisory Board (CAB), expansion of the MOAH education program has emerged as a major initiative that is expected to attract new students, members and donors. New fundraising events and modifications to existing events are also being explored as a result of ACT recommendations.

Our Education Task Force planning group (which includes Board, Staff, ACT and CAB members) has begun the process of defining the expanded program, a process expected to take several months to fully complete.

See **From Our President**, Page 3

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Frank Livermore 1919-2000

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Executive Director
Donia Bencke,
Gallery Supervisor /
Administrative Support

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From The Executive Director

Ellen Harrington



Moving On

Back in early 1997, MOAH's Director Beverly Nelson contacted me about joining a newly formed garden committee, as the Museum of American Heritage was planning on moving its operations to a new site called the Williams

House and Gardens. With this new facet of the Museum's operations, a new committee would be required to oversee the grounds surrounding its new home. Joining a group of others knowledgeable in horticulture and historic preservation, plus key museum staff, I soon became another dedicated volunteer. Eventually this position landed me a spot on the fundraising committee as the garden liaison.

Soon after, I found myself assisting with the Museum's events. Once on board with this group, I found another title as MOAH's resident caterer, a business which I had owned and practiced for a while. The first of these events that I catered was a fundraiser at the home of Marshall and Nancy Mathews and their fantastic antique automobile collection. Hors d'oeuvres, a sit-down dinner and dessert were enjoyed by approximately 80 guests and served by our competent volunteer staff, while visitors learned about the various educational programs MOAH offers.

In May of 2000, I offered to take on the role of Executive Director for three months, while the Museum's search committee recruited a new director. Needless to say, I applied for the position along with a few others, and the rest is history.

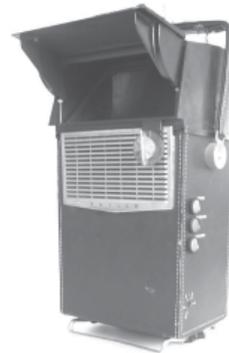
Sometime in December, I will be retiring and moving to Santa Rosa. The early years as a volunteer and the five and one half years as Executive Director have offered many rewards and a terrific education. I surely have made many friends at the Museum and throughout the community in this post, as I have extended MOAH's outreach and visibility.

As I have said on numerous occasions, the Museum has the most competent, talented and dedicated group of volunteers one could find in a given location. Kudos to you all and your terrific educational programs. I thank you all for your support, friendship, challenge and education. This has been an incredibly rewarding era in my life.

Recent Acquisitions: Have You Seen Us?

The Museum of American Heritage is fortunate in receiving many artifacts as donations.

One recent acquisition is the first production, self-contained, battery-operated, portable transistor television, made by Philco ca. 1959. The picture is projected up from the bottom to an angled mirror that is the viewing screen.



Every now and then, we receive an item that stumps us. Such was the case with the object shown to the right. We've actually had it for quite a while but just recently found out what it is. Can you identify it???

Visit us to see these and many other fascinating artifacts of the past.



FROM OUR PRESIDENT, continued from Page 2

With the initial study complete, two ACT members are actively participating in our planning: Bob Asadorian as a member of MOAH's Community Advisory Board and Jeff Risberg as a member of the Education Task Force planning group. Welcome, Bob and Jeff.

End of an era ...

After 5-1/2 years of exemplary service as MOAH's Executive Director, Ellen Harrington is retiring and planning to relocate in Santa Rosa. As a volunteer before assuming her current duties and as Executive Director, her enthusiasm, competence, drive and insights have greatly enhanced the Museum's educational programs, our facilities and garden, and our stature in the community. As we have worked with Ellen over the years, we have all come to recognize and value her leadership and contributions to both MOAH and Mid-Peninsula communities.

Ellen, we will miss you greatly. And we all warmly wish you happiness and contentment in retirement.

Current Exhibit - *Construction Toys in Motion*

October 7, 2005 – January 29, 2006

Theodora Nelson

A. C. Gilbert, inspired by cranes assembling steel girders alongside train tracks, created a new toy in 1913 – an assemblage of metal beams with evenly spaced holes for bolts to pass through, screws, bolts, pulleys, gears and eventually even engines. Backed by the first major American ad campaign for a toy, the Erector set quickly became one of the most popular playthings of all time.

During World War I there was an attempt to ban the manufacture of toys to concentrate on the war effort. “The greatest influences in the life of a boy are his toys,” Gilbert told the Council on National Defense when he appeared before the Council, armed with Erector set parts. The Secretary of the Navy was soon on the floor playing with a toy submarine. Other members could be seen tinkering with toy engines and building models of bridges. In the end, the Council decided not to ban toys, and Gilbert became known as the “man who saved Christmas.”

MOAH’s exhibit, *Construction Toys in Motion*, features a host of construction toy models, most of which are built from Erector or Meccano parts.

There’s a giant Ferris wheel, along with a history of how the first one was built for the 1893 Chicago World’s Fair.



There’s also a metal steam shovel ... note the boiler and stack; this rideable toy is modeled after the steam shovels that were used to dig the Panama Canal, which opened in 1914. Machines very much like it (without the handles, of course!) are visible in photographs and movies made of the canal’s construction.

You’ll see models of a paddle-wheel riverboat, a Hudson locomotive and the Mount Washington cog railway. There are autos, trucks, planes and even a dirigible. Many of the models operate at the push of a button. Metalcraft, Kelmet, Marklin and other construction sets are represented, as well as Erector and Meccano.

Charles Pack, MOAH Treasurer and Erector set hobbyist, curated the exhibit and built most of the models. He’s on site most Saturdays and Sundays from 2 – 4 p.m. to talk about building these fantastic models and to demonstrate some of them. If you want to be sure he’s here when you plan to visit, please call ahead to confirm.

MOAH thanks.....

Bells Books * Meri & Joe Erlich * Garden Club of Palo Alto * iRobot * Judy Kormanak * Lin’s Toy Cupboard * Virginia & Jim Lyons * Mid-Peninsula Bank * Palo Alto Rotary * Palo Alto Sport Shop & Toy World * Peninsula Creamery * Girvin Peters Landscape * Roxy Rapp * Talbot’s Toys

Museum Sponsors for 2005

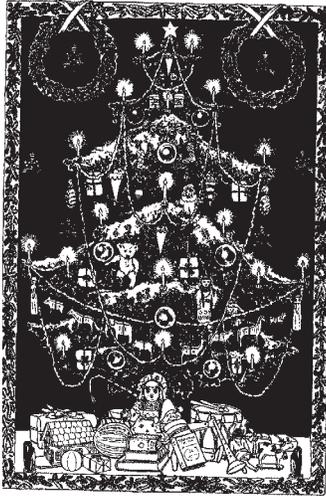
Frank Livermore Trust * Moore Family Foundation * See’s Candies

Light up the Holidays

November 18, 2005 – January 8, 2006

Theodora Nelson

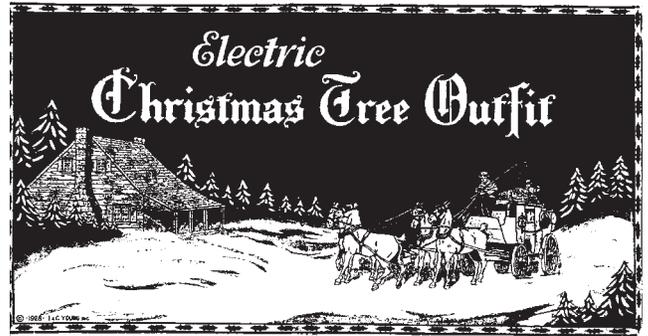
Every decade brings its own distinctive variation of holiday lights. Back in the early days, folks actually hung candles on their trees, often with explosive results! Thereafter, electric lighting emerged, making holidays much safer. It also offered manufacturers the chance to introduce new materials, shapes and colors, encouraging consumers to replace their old-fashioned decorations. Remember “bubble lights,” aluminum trees and rotating color wheels?



For this holiday season, MOAH presents *Light up the Holidays*, in our Collections Corner. The exhibit, drawn from the extensive collection of James Welch, Palo Alto resident and organist at St. Mark’s Episcopal Church, features a delightful assortment of lights and accessories from the 1920s through the ‘60s. The display is sure to bring back memories for the whole family to share.

Strings of lights can be dated by the materials used for the cords (fabric or plastic), sockets (porcelain, bakelite, or plastic) and bulbs themselves, Welch points out.

The shape of the bulb is another clue, he adds. They may be balloon-shaped, flame-style, or many other variations. Examples of many styles, as well as colorful original packaging, will take you back through the decades as you view this enchanting display.

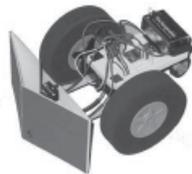


James Welch will conduct a gallery talk about the exhibit *Light up the Holidays* on Saturday, December 10 from 2:00 PM to 3:30 PM. The talk will be free and open to the public.

MOAH Shop News



Radio Kits - Kits to build your own radios. Includes crystal radio kits that will work without batteries or electric power source.



PROTObot - Camp Peavy's robot kit! Take home a piece of a MOAH exhibit! (You'll need an internet-connected PC to download its programs.)



Ramon the Robot
It walks, it runs, it sits, it bends, it picks up things and even sings two songs. Fifty functions, 172 vocal responses. Operates from infrared remote controller. Requires 1 9V, 8 AA and 2 AAA batteries.



Rockit Robot - with touch and sound sensor. Backs and turns on loud noise or contact. Appropriate for ages 10 and up. Assembly with hand tools needed. No soldering required; needs 2 AA batteries.

<p>The MOAH Shop 212 Howard Ave. Palo Alto, CA 94301-1731 650.321.2044 Hours: Fri, Sat, Sun. 11 am to 5 pm www.moh.org</p>	A Gift Certificate		\$100
	For: _____	Date: _____	Expiration: _____
Value: _____ Dollars	Authorized Signature: _____		

Puzzled on what to get for someone special on your holiday gift list? Gift certificates are available in multiples of \$5.00 and make ideal gifts for those who like to select on their own.

***** MOAH members receive a 10% discount on all regularly priced items *****

Ernie Faxon, MOAH Shop Director

Education Department

Wendy Breu



Class Updates

We hope all our readers had a restful Summer. For the months of September through November, we scheduled four enrichment classes to complement the new school year: *Simple Machines*, *Basic Electric Circuits*, *Magnetism & Electromagnetism*, and a new workshop titled *Machine Anatomy: What's Inside?*

We continue to support homeschooling families in the South Bay area by offering their students programs during the weekdays, with Dor Hesselgrave teaching *Basic Electric Circuits* to a group of homeschoolers on four Tuesday afternoons in November. By the way, students who have taken classes at MOAH have voted Dor one of their favorite instructors.

During the last year, two separate Lyceum groups sub-contracted MOAH to design workshops specifically for their talented young members. I am sorry to report that Menlo Park Lyceum is no longer in existence. However, Santa Clara Lyceum remains a strong ally with MOAH. They have requested that MOAH schedule six classes for their members, the first being an intensive, one-day *Mini Crystal Radio* workshop taught by Larry Pizzella on November 19.

Please note that classes are not scheduled in December, as the Learning Center will be staging holiday displays.

MOAH Outreach

Sunday, October 2, marked the third year MOAH has participated in the Sally Ride Science Festival, which took place this year at NASA. The Festival format remained the same as in prior years: morning street festival, lunch, keynote speech by Sally Ride, and children/parents workshops designed to motivate girls to study math and science. Over 1,200 girls in grades 5 to 8 and hundreds of parents visited exhibitors from various Bay Area firms and establishments such as IBM, Intel, Google, NASA, USS Hornet and, of course, MOAH. Our tables were well attended. Students loved getting a hair-raising experience with the Van de Graaf Generator. They also enjoyed making spectroscopes as take-home souvenirs. After Sally Ride's inspiring speech, she and fellow female astronaut Janice Voss answered students' questions on topics ranging from their favorite foods in space to what advice they would give to students. To the latter question, both Ride and Voss emphasized the importance of excellence and persistence.



Sally Ride and Janice Voss taking questions

Family Math Day returned to MOAH this year on October 22. This community members' favorite was made possible by a generous grant from Mid-Peninsula Bank. Once again, Rita Wespi staged a fun-filled afternoon with all sorts of new and old mathematical games requiring logic and strategies suitable for students in grades 2 through 8.

New Class Offering

We are delighted to announce that MOAH has added two brand new workshops to our education class roster.

The first, *Machine Anatomy: What's Inside?*, was taught in early November by Steve Jasik, a retired engineer. In this two-day class, students got a chance to look at modern industrial design from the inside out. They took apart complicated electro-mechanical devices like printers (laser & inkjet), disk drives and VCRs to see what's inside them, how they were designed, how they work, etc.

The second workshop, *RoboMania*, comes about as a result of the highly successful LEGO® Robots unit offered during MOAH's 2005 Math and Science Camp. Please watch for more updates in early 2006.

Getting Latest Updates

As always, to get the most up-to-date information on education classes and special events, please check our web page at www.moah.org/education.

The Role Of A Family Garden

Patti Anderson



The role of the gardens when the Williams family lived in the home was just that, a family garden. The gardens were laid out in rooms, much like a house. The Front Lawn Garden was more public and was used for entertaining and relaxation. In the 1930's there was a fish pond that has since been removed. There are wonderful original plant specimens remaining such as the *Myrtus Communis*. There is also an existing bird bath. We will soon discover how to turn it on for all to enjoy!

There were also working gardens, just like we have at our homes today. The Pippin and Gravenstein apple trees, as well as the persimmon, still exist and produce wonderful fruit. There were also vegetable and herb beds.

Today, we still treat the garden as a family garden. This is not so much a demonstration garden as it is a working garden. We plant seasonal heirloom vegetables and flowers. Be sure to check the gardens to see what Fall and Winter vegetables we choose to plant this year. One of our favorite plants this summer is the Cinderella Pumpkin. It looks just like the pumpkin that is turned into the carriage in the Disney movie, Cinderella. We have started doing a great deal of composting as well, as we try to reduce the amount of yard waste we put out each week.

This Summer we held a demonstration on sheet mulching, led by our "resident" permaculture expert, William Mutch. Rather than pulling up the "weeds," we put down a layer of cardboard, then newspaper, then a mixture of planting mix, compost and worm casting. This process allows the weed to decompose back into the soil, feeding it vital nutrients. We thank Lyngso Garden Materials for the discount on material used in the sheet mulching.



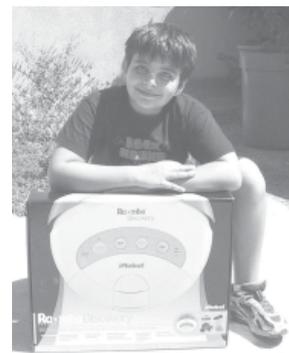
Volunteers are always welcome in the garden. We work every Thursday morning from 9:30 AM to 11:30 AM. Experience is not required, just the desire to get dirty and have a lot of fun.

Robot Roundup!



On Saturday, July 30, 2005, about 200 children with their parents enjoyed another one of MOAH's great and fun family activity days at the *Robot Roundup!* If you were building a robot, enjoying an ice cream sundae and popcorn, or entering the drawing for a special prize, you were among the many others having a great afternoon.

Our congratulations to the winners of the Design a Robot coloring contest: Max Amini Holmes, age 4, Brigitte, age 9, and Bianca Broszus, age 12. An honorable mention was given to the parents who entered into the spirit and designed robots. You can see all these great works of art at: <http://www.moah.org/events/index.html>. Frances Mayers won the grand prize, which was a Roomba robot vacuum cleaner. He looked very happy.



Our thanks to the following for their donations for the event: Judy Kormanak, Lin's Toy Cupboard, Palo Alto Sport Shop & Toy World, Peninsula Creamery, Talbot's Toys and iRobot.

Wish List

- Small patio table and chairs
- Small greenhouse
- Electric hedge clippers
- Laptop computers, Pentium III or later
- Volunteer licensed electrician
- Low voltage lighting system elements
- Donated or heavily discounted warehouse space
- Pallet shelving for warehouse
- Surplus construction trailer usable as temporary warehouse office

Volunteer Spotlight - MOAH Membership Team

Phil Lumish

Bob Boschert



Our first distinguished volunteer is Bob Boschert, better known to all of us as “Mr. Science.” As Bob tells it, he thinks he first got involved with MOAH because of his collection of antique light

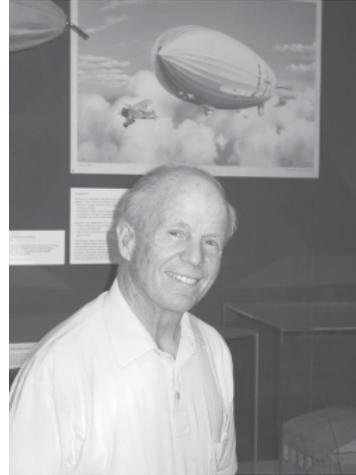
bulbs and antique gas engines as well as the toys he made by hand. Once he realized what this museum was all about, he could see a real fit between these collections and the interests of the visiting public.

For the past two years Bob has taught at the Science Camp, doing some really interesting work. In year one the students were taught how to wire a house using a four-foot-high wall and, as Bob recalled, “all of the lights lit, and there was no smoke.” The next year the camp attendees learned about fiber optics, including transmitters and receivers. Bob has also brought a lot of these kinds of activities to local schools.

Bob brings a serious amount of professional experience and expertise to his MOAH activities. He was the founder and president of Boschert Inc., the first manufacturer of switchable power supplies. (If you don’t know what these are, just remember every personal computer has one. I am sure Bob will be glad to explain the details if you are interested.) After leaving the company in 1979, Bob became “Mr. Mom,” taking care of five daughters. As the girls grew he expanded his activities into an informal youth center, where as many as 23 boys were watched over.

There is limited space to this article but suffice it to say that, in addition to many other activities, Bob was also a hot air balloon pilot. How many of us can say we have ever met someone with that skill set?

Buck Cox



Our second but equally important volunteer is Ashley “Buck” Cox. If we were to give Buck a title of his own, we think “Mr. Volunteer” is most appropriate. In addition to working with MOAH, he is a part of the Cupertino Service Club and he works extensively with the YMCA, the Stanford Hospital Blood Center and his church.

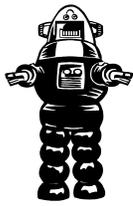
Buck has been a volunteer with MOAH for about two years. He was initially drawn to the museum because, as a youngster, he lived right next door to the current building. In fact, there is a photograph of his home in the museum. He remembers the Williams’ place as having ducks and chickens, which were odd thing to have in the neighbors’ back yard. “Sentimental” is the word he used when talking about that time of his life.

In addition to acting as a greeter/docent one Sunday per month, Buck helps with the gardening chores on Thursdays and has helped with set-up at various special events. Buck feels that there is one key element in all of his volunteering interests, and that is people --- those he works with and those he meets. By finding opportunities where there are nice people to work with, he enjoys the results virtually every time.

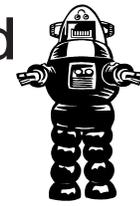
Before retiring, Buck started working as a teacher (and more, as he puts it) at the Palo Alto Military Academy, which later became part of the Harker School. He taught PE and was involved with all sorts of sports. After that he spent 20 years with Corporate Express.

Buck mentioned, with something approaching pride, that in one of his many volunteering activities his group was able to raise \$500,000 for the organization ... quite an accomplishment!

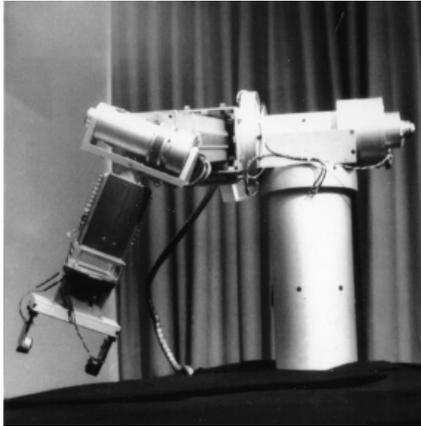
Thank you to both of these outstanding volunteers. We look forward to working with you for many years to come.



Many Aspects of Robots Featured In MOAH Lecture Series



Theodora Nelson

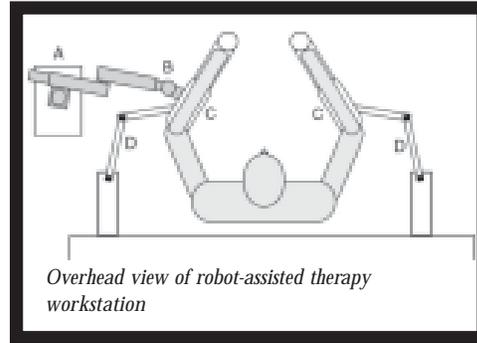


Stanford Robot Arm (photo by Les Earnest)

Robotist and Stanford Consulting Professor Victor Scheinman is acquainted with many influential robots. Some of them he knows extremely well; he designed them. How he created these robots and the way they contributed to the

evolution of robotics was the subject of Scheinman's June MOAH lecture, *Robots I Have Known*. He's still consulting in the field. One of his most recent projects is a robotic milking machine for a Scandinavian dairy farm.

The word "robot" entered the lexicon in 1921 with the performance of the play *R.U.R.* by Karel Capek. The world received much broader exposure to robots in 1927, when Fritz Lang produced *Metropolis*, a stunning silent film that was the first motion picture to make major use of a robot in its plot. Tony Kashani, Assistant Professor of Film at College of San Mateo, discussed the film's background and significance in *Birth of a Robot*, MOAH's July lecture. The evening included a viewing of a recently-remastered *Metropolis*.

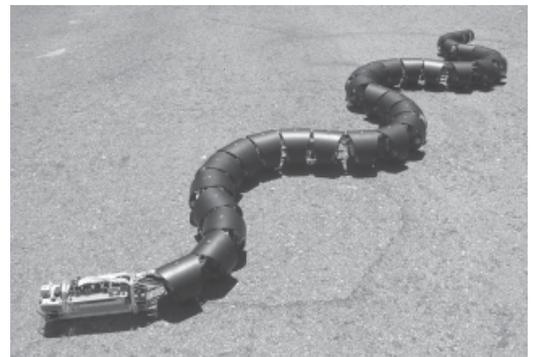


Overhead view of robot-assisted therapy workstation

The August lecture featured Dr. Mike Van der Loos of the Palo Alto Veterans Administration, who drew on his

experience there to discuss *Robots for Rehab*. Movies and TV have long used the concepts of mechanical assistance or replacement of body parts after an injury. It isn't all fantasy: Dr. Van der Loos discussed many practical applications of robotic technology used to aid in medical rehabilitation and provide assistance to humans. He further intrigued the audience with a mention of his newest interest: robo-ethics.

The popular robot snakes returned in September, as Dr. Gavin Miller presented *Snake Robots for Search and Rescue*. His quest to develop a snake-like robot began when he thought about man's favorite locomotive technology – the wheel – and the fact that nature doesn't employ wheel-based locomotion. He went on to describe his private research project through a series of snake-like robots developed to investigate serpentine locomotion, using slithering, side-winding and rectilinear movements. The presentation included a description and demonstration of his latest snake robot (S7), as well as a discussion of the future suitability of this and other snake robots for search and rescue in harsh terrain.



Volunteer Opportunities

Education Assistants

Assisting the Education Instructors, responsible for presenting classes, limited to 16 pupils, to children of various age groups (usually in the 10-14 year old range) and to adult groups. Class subjects offer innovative curricula and education programs of varied technical nature, and some family programs. See the "Education" section for typical class descriptions. Technical skills not required, but helpful. Time Requirements: Variable. Most classes are a minimum of 2-3 hours, once a week for 2-4 weeks, Saturdays or Sundays.

Education Instructors

Assisting the Education Director, responsible for presenting classes, limited to 16 pupils, to children of various age groups (usually in the 10-14 year old range) and to adult groups. Class subjects offer innovative curricula and education programs of varied technical nature, and some family programs. See the "Education" section for typical class descriptions. Time Requirements: Variable. Most classes are a minimum of 2-3 hours, once a week for 2-4 weeks, Saturdays or Sundays. Additional class preparation time.

Events Assistant(s)

Work with the events committee that operates special events for the Museum. Events include one major annual event and one or more smaller events in any of a number of capacities, *e.g.*, reservations & registration, invitations, food coordination, auction, logistics, publicity, set-up, *etc.* Work with Events Coordinator, committee and Executive Director. Time requirements: Variable, depending upon nature of event, specific assignment and attendance at event.

Exhibits Chair/Co-chair

Work in a fun environment with a variety of volunteers, while learning about various artifacts in varied subjects. Coordinate the planning and execution of Museum exhibits with a quality team. Oversee the setting up and taking down of three exhibits/year, the building of props and displays. Assist with artifact installation. Experience not required. Enjoy working with people.

Gallery Assistants

Greet the public and answer questions regarding exhibits and Williams house and gardens. Possibly assist in museum gift shop. Time Requirements: Variable, at least one 2.5-3 hour shift per month.

Garden Volunteers

Work in historic garden, under direction of professional volunteers, on Thursday mornings, planting, trimming, and doing clean-up. Experience not required, but some garden knowledge can be helpful.

To learn more about any of these opportunities, contact us at mail@moah.org or by phone at 650.321.1004.

Welcome, New Members!

Dara-Abrams Family
Theda & Oscar Firschein
Lawrence Jau
Tony Kashani
Lauren Katzive & Glenn Wheatland
Suzanne Kelly
Ed Landefeld
Judith Lautmann
Steven Lee
Craig Lewis & Family
Gavin Miller
Janice Miller
Matthew B. Miller
Jon Mirsalis
Jacqueline & Charles Peterson
Henri Pietila
Sandya Radhakrishna
Tamara & Anthony Raetz
Victor Scheinman
David Schnur
Susan Szegda
H F Machiel Van der Loos
Marion Van Heteren

Supporting

Anderson Chevrolet
Columbia Printing
Gordon-Biersch
Hewlett-Packard
IDEO
Michael Fellman Siding & Roofing
Jungle Digital Imaging
Starbucks Coffee
SummerHill Homes
University Art Center, Inc.

Sustaining

Jennifer & William Schwartz

Thanks to renewing members who have upgraded their memberships

Sustaining

Jane & Bill Bloom
Dr. Bernard Ross

In Memorium

Burt Avery
Steve Fasani
Bill Faxon
Gary Nolberg
J. Ashley Wilson, Jr.

Next Exhibit – *The Art & Evolution of Navigation*

February 10 - May 28, 2006

Bob Katzive

Show me the way to go home.....

That's been an important part of the navigator's job description ever since early travelers went out of sight of their caves. The earliest travelers had only their senses and memories to depend upon. Today we rely upon electronics, computers, satellites and a sophisticated technological infrastructure to show us how to go and where we are, and to answer the question, "When will we be there?"

The navigation story can be experienced at the MOAH spring exhibit *The Art and Evolution of Navigation*, which will run from February 10 through May 28, 2006. You'll be able to try your hand at navigation using medieval instruments and techniques, and we won't neglect the modern age, either.

Here are a few questions visitors will find answers to in the coming exhibit:

- What was the name of the pole star in the sixth century?
- How can you measure latitude with a piece of wood and a piece of string?
- What did people use to measure longitude before the advent of the chronometer?
- What lighthouse gave its name to the word that means "lighthouse"?
- What is a latitude hook and where was it invented?
- How old are the oldest known maps and what do they depict?



As you explore the exhibit, ponder the many changes that have occurred in the art of navigation over the centuries. And as you return to your dwelling, consider the navigational tools and techniques you use to find your way home.



How to Join and Get MOAH for your Money!

Museum members receive this newsletter; attend lectures free of charge; receive a discount on youth workshops, special events and gift shop purchases; and are invited to special members-only receptions for each exhibit. Circle Members also receive tours of private collections and are invited to an annual reception.

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MOAH EXHIBITS, CLASSES, EVENTS

Exhibits: Open Friday through Sunday, 11:00 AM - 4:00 PM (Group tours available at minimal fee)

Construction Toys in Motion

October 7, 2005 - January 29, 2006

Light up the Holidays

November 18, 2005 - January 8, 2006

Garden Gauge Railroad Display

December 3, 2005 - December 17, 2005

Living LEGO-CY

December 18, 2005 - January 15, 2006

The Art & Evolution of Navigation

February 10, 2006 - May 28, 2006

Events & Lectures:

"15" : MOAH's 15th Anniversary Celebration & Tree Lighting Party

Thursday, December 1, 2005, 5:00 - 8:00 PM

Gallery Talk: "Vintage Holiday Lights"

Saturday, December 10, 2005, 2:00 - 3:30 PM

MOAH Collections Corner (free, open to the public)

Members' Reception for The Art & Evolution of Navigation

Thursday, February 16, 2006, 5:00 - 7:00 PM

Frank Livermore Learning Center

Classes:

Fall Class Schedule

Basic Electric Circuits Sat. 10/8, 15, 22 (10:00 AM - Noon)

Instructor: John Pease

Family Math Day Sat. 10/22 (1:30 - 3:30 PM)

Facilitator: Rita Wespi

Magnetism & Electromagnetism

Sat. 10/29, 11/5, 12, 19 (10:00 AM - Noon)

Instructor: John Pease

Machine Anatomy: What's Inside?

Sat. 10/29, 11/5 (1:00 - 3:00 PM) (ages 10 and up)

Instructor: Steve Jasik

2006 Class Schedule

Build a Crystal Radio Sat. 1/7, 14, 21, 28 (10:00 AM - 12:30 PM)

Instructor: Larry Pizzella

Transistor & Vacuum Tubes Sat. 2/11, 18, 25, 3/4 (10:00 AM - Noon)

Instructor: Dor Hesselgrave

Integrated Circuits Sat. 3/11, 18, 25, 4/1 (10:00 AM - 12:30 PM)

Instructor: Larry Pizzella

**Permanent Exhibits of
the Early 20th Century**

General Store
Kitchen
Print Shop
Williams Gardens
Smith's Shop Machine

Collections Corner

Model Steam Engines (through Nov. 13)

Light up the Holidays (Nov. 18 - Jan. 8)

Recent Acquisitions

Mini-MOAHs (Offsite Exhibits)

Channing House

850 Webster St., Palo Alto

Comerica Bank

250 Lytton, Palo Alto

Stanford Federal Credit Union

694 Pampas Lane, Stanford

Little House

800 Middle Avenue, Menlo Park

For the latest information and class
registration materials, visit

www.moah.org or call 650.321.1004.

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