The phrase "It’s always something" has special connotations at the National Museum of Nuclear Science & History.

At this busy Museum, it IS always something!

Whether we are opening a new exhibit, preparing a kids camp, hosting an event, or receiving new artifacts, the Museum is constantly in planning mode. All of our departments work together to ensure the success of each endeavor.

Our recent acquisitions of the Gadget and the Peacekeeper missile (see “From the Director” on page 2) and the upcoming “Tech City” exhibition (which will open in February 2012) all required months of work by many staff people and volunteers in order to invite the public to view them.

Let’s use an exhibit for an example (a traveling or temporary exhibit and not a permanent exhibit). Many months, even years, before an exhibit goes on display, the wheels must be in motion for that exhibition to be open to the public. The very first step requires an exhibit team to confer about possible topics for the exhibit. Will it reflect our science emphasis or meet our history focus?

Then there is the ever-important funding. We often look for underwriters who have some connection or interest in the topic and ask that they enter a partnership with us to develop and display the exhibit. Then the curatorial and exhibit staff must go to work, designing the content of the exhibit and seeking artifacts that fit the topic, if we are putting up the exhibit ourselves. (Sometimes we rent traveling exhibitions, such as Tech City, but we often design our own, such as Bikinis and Martinis: Life After the Bomb, which is on display now.)

Once an exhibit has the basics in place, other programs must be determined. What kind of education programs will we offer school students or visitors? Who will conduct those programs? How will we let the public know about our new exhibit? Will we use classic advertising or social media to announce our news? Do we need volunteers to help us erect the exhibit? And on and on….

All of these parts (and the additional work of folks in finance, program administration, membership relations, and even the store) must work together to help us present an exhibit or an artifact, or a program.

So the next time you view an artifact or attend a lecture or bring your child to an event, remember how we’re always up to something!

Tech City is “a traveling 3,000 sq. ft. exhibition that includes fun, interactive stations where visitors solve the kind of real-world problems that engineers face. The exhibits present an engineering approach that includes opportunities or designing, building, testing, and modifying.”

Sponsored by:

[Image of sponsors: Raytheon, Ktech, PNM, Sandia National Laboratories]
From the Director

Sometimes serendipity plays a larger role in the world than we would like to think it does. Such was the case in both of our recent, unique incidences of “lucky collecting.”

Last year we were notified that the Museum would receive materials that had been held for many years within Los Alamos Lab archives. The weapon materials were cleared for classification concern and were simply excess material. Within this body of stuff was a disassembled “Gadget.” Now the Gadget was a truly secret item in its time. This was the device created by Manhattan scientists at Los Alamos and hoisted to the top of the Trinity test tower, detonated on July 16, 1945, bringing the world into the atomic age. This was the object the Russian spies were trying to learn about and our government was trying to protect.

The casing we received is a real one, an original aluminum casting from 1945. Very rare indeed. It took us a while to prepare, but with a lot of historical photographic research, volunteer effort and head scratching to make up the parts we needed, it was completed. The Gadget now stands near our historic Packard Clipper and completes the Trinity exhibit. Generous support for this effort comes from Dr. & Mrs. Alton D. Romig, long-time supporters of the Museum.

The second lucky collecting we recently experienced brought us a much more recent historical artifact. The Museum has maintained for many years a long list of aircraft and missile materials as a “wish-list” with the curatorial department of the National Museum of the United States Air Force. This list is important because if we are not requesting an item, we won’t be notified or offered that object if it were to become available to us. Something was overlooked in the examination of this list because through true luck we learned of a Peacekeeper MX missile that might be available. We have had that very object on our list for 10 years.

We heard about it from a different source and when we looked into it, this was the last one in existence; the others had been destroyed to meet U.S. treaty compliance. So we got busy, we had wonderful assistance from Veronica Vigil, a new Museum volunteer that works in missile control. The missile came via C-5 transport from Wright-Patterson AFB and was transported to our back yard by the great team at Kirtland logistics. It will take some fundraising to have it on permanent display but now at least we have it.

In both of these instances, our Museum was truly lucky.

Sincerely,
Jim Walther, Museum Director
Object at Hand

The “Gadget”

by David Hoover, Museum Curator

The “Gadget” was the code name given to the first atomic bomb tested. It was so called because it was not a deployable weapon and because revealing words like bomb were not used during the project for fear of espionage. It was an implosion type plutonium bomb similar in design to the Fat Man bomb used three weeks later in the attack on Nagasaki.

A subcritical sphere of plutonium was placed in the center of a hollow sphere of high explosive. Numerous detonators located on the surface of the high explosive were fired simultaneously. This produced a powerful inward pressure in the core, squeezing it and increasing its density, resulting in a supercritical condition and a nuclear explosion.

The initial design, based on work done using cyclotron-supplied plutonium, was envisioned as a gun-type device, akin to the Little Boy uranium bomb. However, mass-produced plutonium emitted enough neutrons to make it likely that it would pre-detonate with low yield, thus making the design known as “Thin Man” unusable.

Subsequently, an implosive design was selected, resulting in the design known as Fat Man. Both Fat Man and the gadget are not strictly “Fat Man type”, as the design was modified into a production design, and both were strictly one-off prototypes. The implosion design was very complicated, and a test was required to see if it would actually work. The Uranium bomb Little Boy was not tested due to its simpler design, and the fact that there was so little uranium available. It was decided to test it in action.

The gadget would be tested at the Trinity Site near Alamogordo, New Mexico. Initial assembly took place at the McDonald Ranch House. For the test, the Gadget was lifted to the top of a 100 foot tower.

J. Robert Oppenheimer made one final inspection, as described in The Making of the Atomic Bomb by Richard Rhodes: “Sometime early that evening Oppenheimer climbed to the tower platform to perform a final inspection. There before him crouched his handiwork. Its bandages had been removed and it was hung now with insulation wires that looped from junction box to detonator plugs that studded its dark bulk, an exterior as ugly as Caliban’s. His duty was almost done.”

A team of museum volunteers and staff has been working on an amazing mockup of the Gadget, which will go on exhibit in the Trinity Gallery.

Would you like to receive our monthly e-newsletter to keep current with Museum events? If so, email marketing@nuclearmuseum.org and include the words “subscribe to e-news” in the subject line.
The Einstein Society: Its Beginning and its Growth

by Nadine Scala, Development Associate

How do ideas emerge and become realities? The answer – by sitting around a table and brainstorming with colleagues. About 15 years ago Judith Mead, current secretary and member of the Board of Directors of the Museum, recalls brainstorming conversations with Harold Jeblick, Membership Chair, Jim Walther, Museum Director, and other board members about increasing membership based on different levels involving higher donations and benefits.

So Judith evolved the idea of an Einstein Society for the Museum which included the following levels: Seaborg, Fermi, Oppenheimer and Curie. Judith suggested that the $1000 level would be a Curie level and the other levels were appropriately named after outstanding physicists who had worked in the field of Nuclear Energy. Jim became the first Einstein Society member with his contribution of $500 which today represents the Oppenheimer level. Recently, two Corporate membership levels were added.

From 1998 through 2002, Einstein Society membership increased based on the new levels and annual dinner events were planned to thank members of the Einstein Society. In 2003, the museum Board of Directors and staff provided Dr. Andrew Kadak with the first official National Award of Nuclear Science & History at the Einstein Society Gala at the Sheraton Old Town. From 2004 to 2011, the Einstein Society Gala morphed into a major fundraiser and award ceremony with almost 400 in attendance at the March 2011 gala.

The Einstein Society Gala fundraising events provide the foundation for the outstanding educational programs and exhibits offered by the museum. We invite you to join one of the Einstein Society levels or move up a level and enjoy the special benefits provided. The Einstein Society grows because members bring in friends and colleagues to join. The annual Einstein Society Gala is now the most exciting premier event to attend. For more information, call Nadine Scala at 505-245-2137, extension 113.

Calling All Neutron Members! Please Join Us!

Science à la Carte activities
Refreshments
Seek and Find Self-Guided Museum Tour
Special Guest Appearance by Sandy the Lab
And more...

Saturday, Sept. 24
1:00 - 3:00 p.m.

Fall 2011 Neutrons Day

Leaving a Legacy

by Cynthia Nagel, Financial Advisor with Waddell & Reed

People often think that estate planning is only for the rich, or for those who want to pass on a large estate at their death. However, estate planning is actually the process of making the most of what you acquire during your lifetime. It involves making plans to have adequate income as long as you live, deciding how to treat your heirs fairly (but not necessarily the same), and making sure that your wealth, whether a little or a lot, will help those you care about and the causes you support most.

Tomorrow, next year, or five years from now may always seem on the horizon. But if you continue to wait until some future date to make your plans, it could be too late. If you fail to plan, your wishes may be unknown and impossible to follow. Certainly, everyone would like to see their loved ones receive what they deserve.

Nevertheless, the only way to see things happen the way you would like is to develop a comprehensive estate plan. If you have a financial plan in place, make sure it includes strategies for distributing your assets when you’re gone. If you have no plan at all, call your financial advisor and start discussing your preferences now. For your future. For your assets. For your loved ones.

To learn more about financial planning and other ways to develop legacy, charitable and estate planning strategies, please contact Cynthia Nagel, Financial Advisor with Waddell & Reed at 505-888-7944, extension 146, or crnagel@wradvisors.com. Waddell & Reed, Inc., Member FINRA/SIPC. Waddell & Reed is a proud Museum sponsor.

Our thanks to our newest partners!
August 12, 2011 marked the final day of another extremely successful “Science is Everywhere” Kids Summer Camp. Children ages 6 through 13 experienced a wide spectrum of exercise for the mind while enjoying such camps as Robotics, Science of Art & Design, Going Green, and Grossology, just to name a few.

Due to our Education department’s strong desire to constantly increase the quality of summer camp, students involved in the multiple robotics summer camps were introduced to a whole new way of understanding how robots operate. Thanks to a grant from the University of Nebraska, entitled “GEAR-Tech-21,” students learned not only how to use a hand-held GPS (Global Positioning Systems) receiver, but also how to incorporate GIS (Geographic Information Systems) information into the programming of the robot.

Now, as the days grow shorter and the air becomes cooler, we are quickly approaching our Winter Day Camp, which the Museum will host from December 19th-December 23rd. These one-day camps are a wonderful opportunity for children to learn about science in a fun-filled way while they are on vacation from their normal school schedules. Make time in your holiday for at least one of these day camps which are scheduled from 9:00 am to 4:00 pm. Museum members receive a 10% discount off of the regular $50 daily fee. For more information, please contact the Museum at 505-245-2137, extension 103.
Save the Date

The National Museum of Nuclear Science & History’s 15th Annual Einstein Society Gala

Saturday,
March 17, 2012
6:00 p.m.

6:00 p.m. Silent Auction
7:00 p.m. Dinner
8:30 p.m. Award Presentation
Followed by Dancing

Hotel Albuquerque at Old Town
Black Tie Optional