Institute of Museum and Library Services
Sparks! Ignition Grants for Libraries and Museums (SPARKS-FY13)

Chabot Space & Science Center Foundation

PROJECT TITLE

Random Acts of Science: A Community Outreach Partnership
Award number: LG-45-13-0166-13

DESCRIPTION OF PROJECT PARTNERS

Chabot Space & Science Center – provided administration and oversight of the project; fundraising support; convened partner meetings, sought and scheduled outreach sites; curriculum development in conjunction with the East Bay Astronomical Society; media and community outreach.

Oakland Fire Random Acts – provided support in purchasing major supplies and building equipment, including fully customized trailer storage; fundraising support; assisted in outreach planning at specific sites; managed training of firefighter volunteers; program development; onsite program delivery including IT support.

East Bay Astronomical Society – provided curriculum development support; program planning; testing of astronomy equipment; onsite program delivery.

OVERVIEW

The "Random Acts of Science: A Community Outreach Project" was conceived to help address the lack of science literacy amongst students and families in the underserved areas of Oakland, California. This project provides telescopes, astronomy and space travel education to underserved schoolchildren, community groups, seniors, groups in the faith community, and others. Partner Oakland Firefighter's Random Acts provides volunteers that support the development of the curriculum, technical IT and AV support, and a dedicated, historic, full-sized fire engine, creatively retrofitted and used in the service of delivering the outreaches. Eastbay Astronomical Society supports the project with dedicated volunteer astronomers to deliver the outreach content. The project took longer than expected in the startup/development phase, but once the program experienced its first outreach, was a great success, and has the foundation to continue to benefit schools and communities in Oakland.

CHANGES

Key Personnel:

There were no changes over the course of the year; however in the original proposal we were not clear yet who would be participating from East Bay Astronomical Society. EAS President Barry Leska participated during the grant submission phase, in January 2014 Jon Steel took over the planning role and helped with purchasing telescope equipment and testing. In May 2014,

Barry Leska rejoined the team and both Jon and Barry helped to recruit and train additional EAS members to provide program delivery services.

Timeline:

The timeline shifted for several reasons. First was the government shutdown which occurred when we had planned to complete much of the purchasing of equipment necessary for the project. That led into the holiday season when our team was less available to focus on this project. Into 2014 it was a slower process than anticipated to settle on the right telescope equipment and ensure that it was compatible with the sound equipment, computer hookups and other pieces that had to come together seamlessly. Then the Firefighters were distracted by their annual fundraising event which occurs the end of May. Finally, in late Spring of 2014 the partners were able to finalize the equipment, and come together for intense program development meetings, which culminated in several testing nights to make sure that all equipment would work.

Scope: No changes

Budget: No changes

ACTIVITIES COMPLETED DURING THE PROJECT

During the project, all in accordance with the Sparks! Grant. The activities completed were:

1) **Purchase of equipment** – all equipment described in the grant proposal was purchased, including the telescope and hookups, sound system, projector, large screen, trailer. Because the pieces all had to fit together, we were extremely fortunate to have as our partners EAS whose astronomers extensively reviewed the correct telescope equipment for this project, and Oakland Firefighters, who had extraordinary skills and experience in sound equipment, building storage cases, and large outdoor productions.

Random Acts of Science *Trailer*

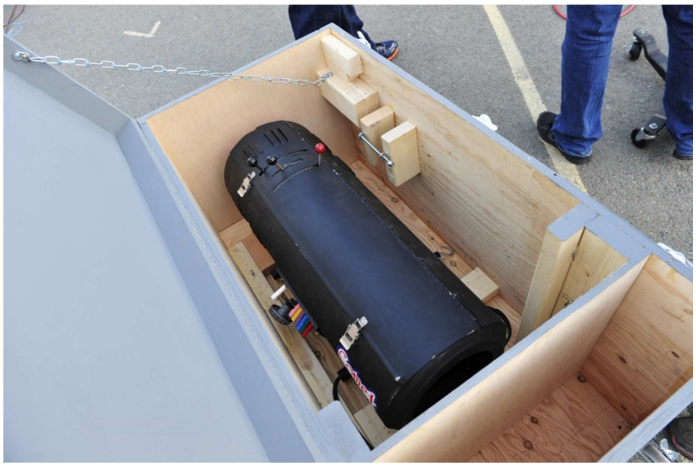
with sponsor logos

OFRA firefighter volunteers – all academy recruits

Screen expands in 4 minutes

EAS astronomers with RAS telescope at Franklin Elementary School

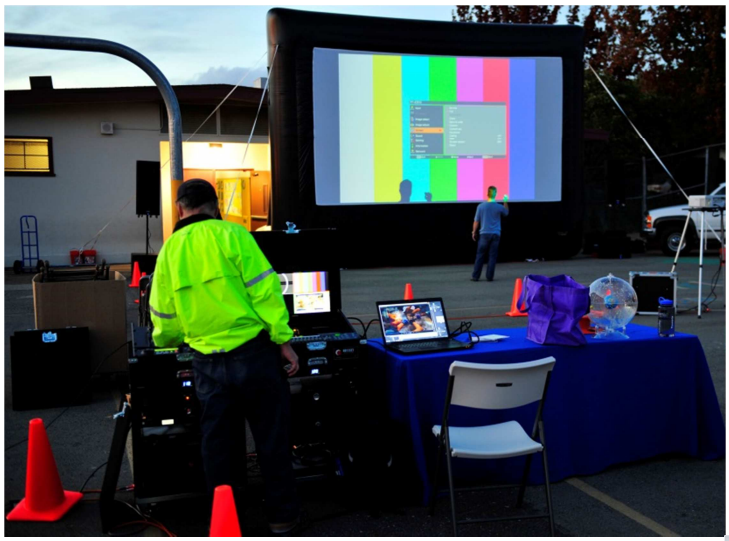
AV and IT equipment that links telescope with projector



One of the custom cases built by firefighters

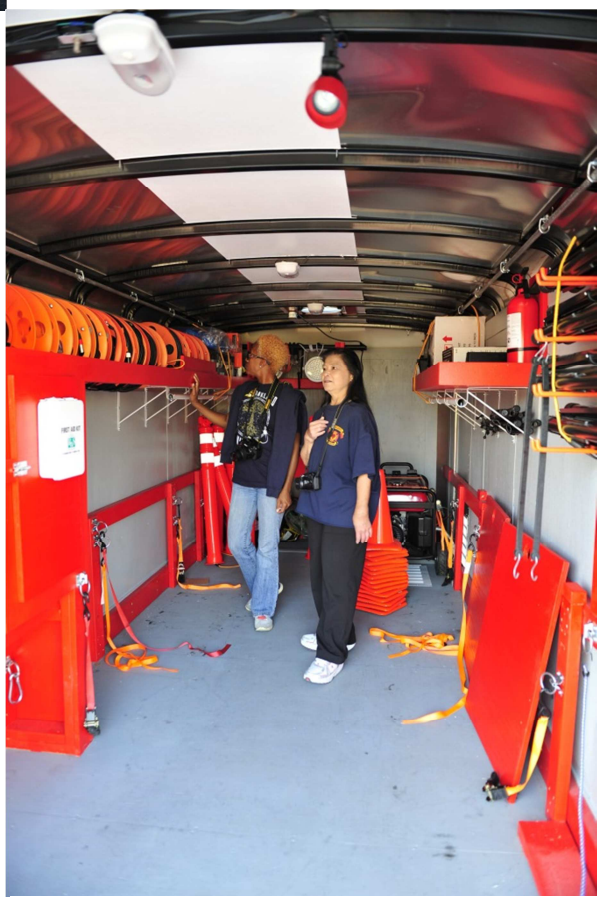
Astronomers setting up telescope to link with AV equipment

2) **Testing of Equipment** – was done by partners EAS working with the firefighters



Several practice sessions were devoted to testing how the equipment would all work together

3) **Building of custom cases, storage logistics equipment, trailer buildout** – all work done in kind by the Oakland firefighters.
4) **Program planning** – the three partners had several meetings throughout the year to plan and assess progress and make changes where needed.
5) **Curriculum development** – EAS and Chabot staff worked together to create a 90 minute program that included live astronomy lessons and tabletop demonstrations. In addition, the Oakland Firefighters produced a video to educate outreach guests about firefighter careers.
6) **Program practice** - All three partners participated in several small practices and two full scale practices before we went "on the road" with the program.
7) **Program delivery** - ongoing
8) **Assessment** – completed initial assessment and are modifying program to improve delivery.



The inside of the trailer was custom finished by firefighters to allow for secure storage of equipment for transport.

PROJECT RESULTS

This first year of Random Acts of Science the team was immersed in trying to pull together all the necessary pieces – in essence the first year was a research and development startup phase. Working with astronomers on one hand and firefighters on the other hand, we were working with two very different cultures – the astronomers were very theoretical, measured and were slower to make decisions, while the firefighters were spontaneous, high energy and decisive, but not always thoughtful in the best way to move forward. It was important for the project lead at Chabot to keep everyone in communication and on track.

Once we were ready to choose our first outreach location, the team partners had a long discussion about logistics and safety for both the partners and for the community invited to the outreach. While the purpose of the Random Acts of Science outreaches are to go into the most challenging neighborhoods of Oakland, the safety of the outreach team was a strong consideration. A Yahoo poll recently named Oakland #2 Most Dangerous cities – the vast majority of nearly 100 murders during the year were in the very neighborhoods that RAS wanted to target. In addition, starting in 2012 a rash of strong arm robberies had taken place targeting news crews reporting on crime in Oakland – news vans had been broken into, and reporters had their expensive equipment stolen while on air. The team decided that for the first outreach, they wanted to ensure that the location could be secure, at least so that it could be determined what steps to take in future outreaches.

Franklin Elementary Principal Jeanette Macdonald with EAS volunteers

Oakland Fire Random Acts had worked in the past with Oakland Unified school principal, Jeanette Macdonald, a veteran of 18 years at Franklin Elementary School. Her familiarity with the school community and neighborhood were an important factor as choosing that location for the first outreach. Franklin Elementary is a Title 1 school of nearly 800 students. Franklin is a large, multilingual-school that attracts—and actively recruits—many first-generation immigrant families. The school offers 11 bilingual classes for students speaking Cantonese, Spanish and Vietnamese, as well as 20 Structured English Immersion classes for other language groups. Students of Asian and Latino descent make up 70 percent of the student population, and 67 percent of the students are English language learners.

At the outreach we had 9 firefighter volunteers, 5 astronomers from EAS, and two Chabot staff. Setup took about 45 minutes. The night far exceeded our expectations insofar as the number of families we got – it was a World Series game night and we expected barely anyone to show up – instead, families started arriving and at the end of the night we counted about 250 people - multiple cultures and with mostly kids ages 6-10. The Chabot staff spoke to nearly every family and passed out calendars and Chabot free admission passes. Most of the parents were not English speakers, and while most of the kids had been to Chabot on a field trip, not one parent we spoke to knew what Chabot was.

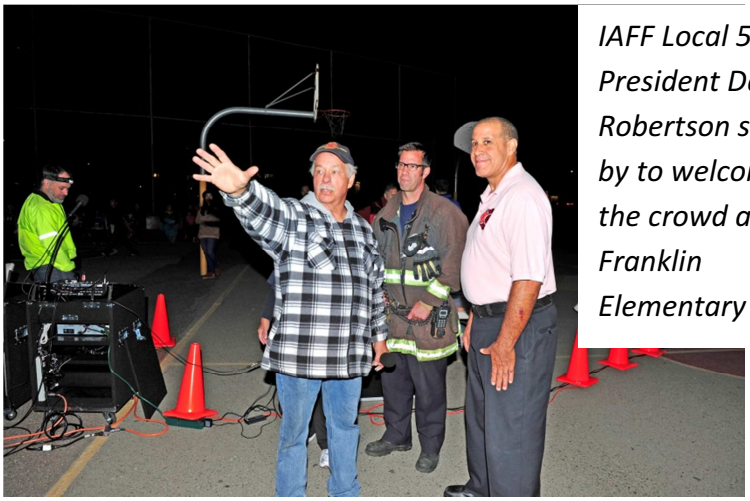
Oakland Firefighter Random Acts and East Bay Astronomical Society participants in the first Random Acts of Science outreach

Melissa Russo and Autumn King from Chabot Space & Science Center

Steve Berl doing a solar system demonstration at Franklin Elementary

That night we demonstrated the huge potential of RAS for impact on the low income communities we are trying to reach. Giving out Chabot admission tickets to these low income residents was an important piece of bringing these families into the fold and helping motivate them to spend time at the science center. Steve Berl, the volunteer doing the tabletop demonstration, had kids crowded around his demo for the short hour and a half he was there - and they were asking him a million questions. These kids are clearly curious and hungry for what we can provide, and this kind of outreach gives them a taste.

The other benefit to Chabot, not necessarily considered at the outset, or in our original proposal is the goodwill it brings to the Center, and the notice we got from the district councilmember and from the IAFF Local 55 President who stopped by (at the invite of our Firefighter partner) to welcome the kids.



IAFF Local 55 President Dan Robertson stops by to welcome the crowd at Franklin Elementary

Another benefit was public awareness – the trailer has our giant logo on the side - while we were unloading and setting up, neighbors kept walking by and people kept asking us through the fence who we were and what we were doing. There was an unrelated group on the school's soccer field and the coach came over with questions, letting me know that he was working to get his kids into college - and he made sure to stop the practice and bring about 25 young kids over to participate in the presentation.

Some of the kids and families that attended the Franklin Elementary outreach

There were no severe obstacles to success – minor obstacles were:

- individual schedules were a challenge in pulling everything together to actually launch
- the weather will always be an issue – the outreach requires we be outdoors
- safety is an issue as we prepare to go to more difficult neighborhoods or schools
- we had not realized that the city would require an event permit for each of our "random acts" – the firefighter partner and school principal were able to get this done with short notice but it added some cost to the outreach

While there were few obstacles, there were areas we know we can greatly improve. As articulated by Cindy Chin, Board Secretary of Oakland Firefighters Random Acts: *"As rough around the edges as it was dealing with many unknown and uncertain factors for the first time, not to mention an unforeseeable weather forecast, it was very important to do this first live presentation so we could see what we need to do to make the next one better. I think we all*

agree that more interactive activities for the kids will feed their natural curiosity and interest and inspire their parents to bring their children to the Chabot Space & Science Center to take advantage of the many free programs they have to offer, which was the original purpose for this project. To me, the looks on the children's faces said it all and showed why it is so important that we bring Random Acts of Science to under-served neighborhoods in Oakland."

Also, we were not able to achieve more than anecdotal information to evaluate the outreach. We had planned to, but we did not collect contact information at this outreach – it did not feel appropriate as we were sensitive to the privacy nature particularly of this immigrant community. It is an issue the team will be discussing for future outreaches as we would like for some way to connect with the families after the outreach.

WHAT'S NEXT

From Oakland Fire Random Acts President the morning after the Franklin Elementary outreach:

"I am so thankful we finally all made this happen. My dream is to take this to much higher levels and develop a killer show that changes kids lives. Thanks again and tell everyone for me. Ray said and I agree we need more telescopes for the kids to look through." - Larry Hendricks

All the partners agree that what happened at Franklin Elementary that night was magical and impactful. We are meeting in January, after the holidays, to plan for and continue the outreaches on a more frequent basis starting in early Spring, to coincide with better weather, and the summer months. With the equipment in hand, and the training and planning done, the partners are all excited and ready to improve the delivery, and schedule an outreach about once a month for the foreseeable future.

At end of night…Firefighter volunteer team packs up the equipment and truck in 30 minutes!