CHM EDUCATOR Fall Newsletter 2016



WELCOME TO THE NEW SCHOOL YEAR!

Welcome to the 2016-17 school year! We are very excited for what the new school year has in store for the Computer History Museum and our education programs. In January 2017 we will open *Make Software: Change the World!*, a new exhibition that explores the impact of software on the lives of people everywhere. In early 2017 we will also be opening a new education center that will offer additional space for school groups and weekend programs as well as public space for families and other visitors.

And there's a lot going on this fall, too! This edition of our newsletter features highlights of some of the programs available this school year, including our ongoing Design_Code_Build (DCB) program, which is now available as a weekday workshop for school groups, and Talking to the Future, an annual event for high school students. For more information about these and all of our programs, please visit our website.

PROGRAM SPOTLIGHT: DESIGN_CODE_BUILD



The Museum's DCB program is now in its third year and has been expanding to reach new audiences. Students and community groups can experience DCB in a variety of learning formats, including daylong programs during weekends or 2.5-hour workshops during weekdays.

As a daylong program, DCB welcomes up to 100 participants and provides opportunities for every individual to challenge themselves, become inspired, and see engineering, science, technology, and math as an exciting adventure in which they can participate. Each event highlights concepts of programming, problem-solving, critical thinking, engineering, creativity, and collaboration and includes an innovative keynote "rock star" speaker from the tech industry. Two levels of the program, introductory and intermediate, are currently offered on weekends throughout the year. Visit the DCB website for more information and upcoming dates.

Educators interested in bringing their students and experiencing DCB during the week can do that now, too! Our new DCB workshops are 2.5 hours long and available for school and community groups, grades 3 through 12. The workshop format emphasizes the same themes as our weekend program, with activities specially tailored for 2.5 hours of learning. All DCB participants are provided with opportunities to explore the Museum's historic artifacts, work hands-on with Raspberry Pi computers, and practice problem-solving, critical thinking, and collaboration. Workshops are offered on Thursday mornings and can accommodate 10 to 30 students. This fall we will also begin offering workshops for families on select weekends. Check our website for upcoming program dates.

EDUCATOR SPOTLIGHT: DESIGN_CODE_BUILD INSTRUCTORS

The success of DCB is greatly enhanced by the team of enthusiastic instructors who help lead each daylong event. Our instructors share a passion for education and technology, and they work hard to share their excitement with students. For the fall newsletter, we asked two of our instructors to share their thoughts and experiences with the program.

JOSE ALVARADO

Since retiring from my software engineering



job at HP, I have concentrated on education, teaching computers skills in English and Spanish at several nonprofits and tutoring high school students in Spanish.

The DCB community program instructor job seemed like a great opportunity to work as an educator in a wonderful environment such as CHM. It has turned out to be that and more.

DCB is a great introduction to computing for kids because it includes a variety of hands-on activities, from outdoor maze "programming" to electronic LED circuit building and operation via Raspberry Pi hardware and Python. Students interact directly with computer hardware and software not generally available to them, and they get to see the connections between their projects and Museum artifacts. Additionally, participants practice essential collaboration skills by working in small teams. Last, but not least, the DCB staff and volunteers are friendly and knowledgeable folks who create a fun high-energy setting for everyone.

Working with DCB has taught me that students' exploration, experimentation, and troubleshooting are effective and fun learning activities. I have also learned that small team projects provide a great introduction for young students to practice planning, collaboration, and creative thinking.

LAURA BUITRAGO



On my first visit to the Computer History Museum, I loved it so much I knew I wanted to be involved somehow. I had heard about DCB from a colleague in Washington, DC, where I lived until early last year, and the program seemed like the perfect opportunity to meld my passions for education, outreach, and tech. I've now been working with DCB for a little over a year.

I moved to the Bay Area to learn how to code, but previously I had been working for the Society for Science & the Public (SSP). Through SSP and its science education programs, I had seen what early exposure to science and technology can do for a young mind, and I wanted to continue facilitating learning for students while I pursued coding for myself, making DCB a great opportunity for me.

My favorite part about DCB is the "rock star" portion because I think it's so important for kids to have role models outside of the typical media we are all exposed to. I also love connecting students with the history of the technology they interact with every day. It so easy for us to take for granted the massive amount of work that it took to get us here!

ARTIFACT SPOTLIGHT: THE UTAH TEAPOT



The fact that a teapot occupies a prominent place at the Computer History Museum may surprise some visitors. But this teapot, just an ordinary teapot from a Utah department store, played an important role in the history of computer graphics.

Generating computer graphics requires translating 3-D objects into data that a computer can understand and manipulate. In 1975, Martin Newell at the University of Utah chose this teapot as a reference model for his imaging work. He carefully mapped out the three-dimensional coordinates by hand before entering the data into his computer, creating a 3-D "wire-frame" showing the teapot's shape.

Others followed up on Newell's work, experimenting with light, shade, and color to make computer images seem ever more realistic. And many of those programmers used Newell's teapot as a starting point, ensuring that a humble teapot would forever have a place in computer history.

VISIT THE MUSEUM: SCHOOL GROUP PROGRAMS

Planning a class trip to the Computer History Museum this year? There are lots of options:

Workshops: During these 2.5-hour interactive workshops, students explore the Museum's exhibitions and engage in collaborative problemsolving projects with Museum educators in our classroom. Workshops are offered on Thursday mornings for groups of 10 to 30 students.

Docent-Led Tours: A tour of *Revolution: The First 2000 Years of Computing* is a great way to introduce your students to the Museum and learn more about the objects and people highlighted in the exhibition. Tours for 10 to 30 students are offered on Wednesday and Friday mornings at 10 am.

Self-Guided Visits: School groups of 10 to 40 students are welcome to explore the Museum on their own. Self-guided visits can be scheduled any time the Museum is open to the public. Education staff are available to consult with teachers prior to their visits.

These programs are free for visiting groups but must be booked at least eight weeks in advance. We also invite teachers to visit the Museum free of charge prior to bringing their group. For more information, visit our website or contact Stephanie Corrigan, scorrigan@computerhistory.org.

UPCOMING EVENTS: TALKING TO THE FUTURE

On Thursday, October 20, 2016, the Museum will



welcome local high school students for our annual Talking to the Future program. This dynamic event connects students with people working in a diverse range of techrelated careers for an exciting day of design challenges, speaker panels, and interactive

demonstrations. Students explore how to solve real-world problems, learn the steps necessary to transform ideas into tech-based solutions, and receive an insider's perspective on career pathways to different tech careers. The theme of this year's program is *Make Software: Change the World!* and will correspond with the themes of our new exhibition of the same name, opening January 12, 2017. The program will feature panelists whose careers have been shaped by changes in software technology, emphasizing the impact software and computers have had not just in creating new tech-based career paths but also altering the nature of jobs in fields from medicine to music to museums.

For more information about Talking to the Future, or if you are interested in bringing students to the event, contact Stephanie Corrigan, scorrigan@ computerhistory.org.

CALENDAR OF EVENTS, FALL 2016

Design_Code_Build: Level 1 Introductory Program: September 24, October 1, October 15, and November 5, 2016; Level 2 Intermediate Program: September 25, October 2, October 16, and November 6, 2016

- Weekend program open to 6th-8th grade students.
- Transportation subsidies available for qualified groups; lunch provided.
- For more information, contact Cate Robbins, crobbins@computerhistory.org.

Google Field Trip Days: October 17, October 25, November 8, and November 15, 2016

- School-day program open to Title I middle schools (6th–8th grade).
- Lunch and transportation reimbursement provided.
- For more information, contact Stephanie Corrigan, scorrigan@computerhistory.org.

Talking to the Future: October 20, 2016

- School-day program open to high schools (9th–12th grade); participation limited to 100 students.
- Transportation subsidies available; lunch provided.
- For more information, contact Stephanie Corrigan, scorrigan@computerhistory.org.



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