CHM EDUCATOR

Summer Newsletter 2017

Computer History Museum

COMING SOON: NEW EDUCATION CENTER

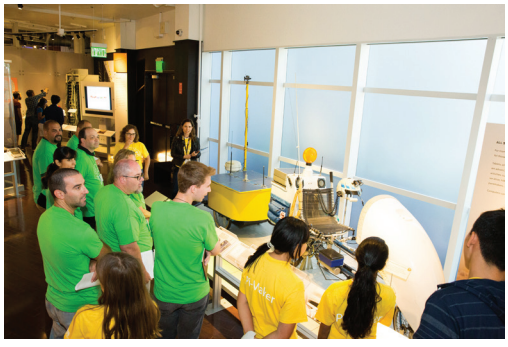
This fall, the Computer History Museum (CHM) will open an Education Center on the first floor, right next to our *Make Software: Change the World!* exhibition. This 3,000-square-foot Center will be an exciting new space supporting a wide array of learning opportunities here at the Museum.

Developed in collaboration with IDEO, and with input from school and community-based educators, the Education Center will expand space available for educational programming, including our workshops for schools, families, and community groups. It will also feature hands-on activities for self-guided groups and individuals and will support research, live events, and collaborative partnerships. These new and growing opportunities will allow us to expand the ways in which we serve the Museum's increasing, and increasingly diverse, audiences.

Principles of inquiry, design thinking, and object-based learning are reflected in the design of the space itself, as well as in our approach to programming. The center design also includes an ongoing effort to prototype and evaluate cutting-edge ways to explore technology's transformative place in our world. As part of this effort, we are documenting the development of this new, innovative space, and publishing our findings as a series of CHM blog posts. Follow us as we get closer to opening; we look forward to welcoming you and your students to the Education Center later this year!

PROGRAM SPOTLIGHT: BROADCOM PRESENTS DESIGN_CODE_BUILD EDUCATORS' EDITION

Are you looking for new ways to incorporate technology, computational thinking, or computer history into your teaching? Our special Broadcom Presents Design_Code_Build Educators' Edition is a great opportunity for you! This special event welcomes classroom and community educators to a fun-filled day exploring cross-curricular applications of computer programming concepts.



Throughout the day, educators will be introduced to Raspberry Pi technology, learn about CHM's educational resources, and discover meaningful strategies for incorporating computer science and computer history into a wide variety of learning environments. Participants will network and share ideas with classroom, community, and other educators while exploring new concepts to take back to their students and communities.

DCB is a full-day event offered throughout the year for middle school students. This special edition allows educators to experience some of the activities from the student program while exploring how the activities and concepts can be adopted in different learning environments.

This event is intended for classroom and community educators interested in learning and doing more with technology. No prior computer programming experience or knowledge of computer history is required. Sign up here.

ARTIFACT SPOTLIGHT: JACQUARD FABRIC SAMPLE

July 7, 2017, will mark the 265th birthday of Joseph-Marie Jacquard. Born into a family of weavers, Jacquard spent his life around looms and made a key contribution to the mechanization of weaving with a punched card loom first demonstrated in 1801.

Jacquard's invention was not actually a new loom, but a piece that, when attached to a loom, allowed for a chain of individually punched cards to automate the process of weaving. The holes in the cards told the loom what to do—which cords to raise for each pass of the shuttle in order to create a specific pattern. Errors in the cards led to errors in the fabric, but once those errors were corrected, the same set of cards could be used repeatedly to create identical patterns. This method allowed looms to be operated and complex patterns to be woven by unskilled workers, making weaving one of the first industries to become automated.

The Jacquard Loom was just one of many uses for punched cards in the 19th century. Inspired by Jacquard's looms, Charles Babbage designed his Analytical Engine to use punched "number cards" to input programs and data. In the 1840s, Alexander Bain used punched paper tape to speed the input of telegraph messages. And Herman Hollerith's electro-mechanical tabulator used punched cards to analyze information collected by the 1890 US Census.

Jacquard fabric sample; Collection of the Victoria and Albert Museum

Hollerith's success with the census led him to create the Tabulating Machine Company, which helped popularize punched cards for storing data. They remained a major storage mechanism for 80 years, well into the era of electronic computers. But Hollerith's success was built on that of other punched card systems—including the Jacquard Loom.

Learn more about the Jacquard Loom and other early uses for punched cards on our website!

VISIT THE MUSEUM: SUMMER PROGRAMMING

Even though school's out, there are lots of ways for groups to visit the Museum in the summer! Tours for groups of students in grades 3–12 are available year-round on Wednesday, Friday, and Sunday mornings. Sign up for tours on the Group Reservations page of our website.

We also have increased availability for our workshop programs in the summer. Workshop programs are available Tuesdays through Fridays in July and the first week of August. Visit our Group Reservations page to see available workshop slots and to sign up for programs.

In addition to our regular workshop programs, we are also offering a special, limited-time program this summer. *The Tessera: Ghostly Tracks* is an interactive mystery for groups of students between the ages of 13 and 17. Players engage with the history of computing and learn about men and women who influenced the development and growth of information technologies.

Through gameplay, students learn and practice computational thinking concepts and skills, such as breaking down large tasks into smaller steps, developing and following detailed instructions, and debugging—identifying and fixing problems they encounter along the way.

If you are interested in participating in *The Tessera*, contact Stephanie Corrigan.

LOOKING AHEAD: FALL 2017

Calling all high school and college students! This fall the Museum will be hosting an engineering design challenge for students. Use household supplies and resources from your community to design and create a machine that will transform a daily task. Submissions will be due on Tuesday, October 10. Look out for more information and competition guidelines to be posted on our website soon! Any questions? Please contact Sara Baechler.

We are also accepting reservations for fall workshops! Beginning in fall 2017, workshops will be offered Wednesday–Friday for groups of students in grades 3–12. Sign up on our Group Reservations page!

CALENDAR OF EVENTS: SUMMER/FALL 2017

Design_Code_Build: Level 1 Introductory Program: September 9, September 23, October 7, November 11; Level 2 Intermediate Program: September 10, September 24, October 8, November 12

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

Field Trip Days: October 24, November 7, November 14, December 5

- Program for Title I middle schools (6th–8th grade).
- Lunch and transportation reimbursement provided.
- For more information, contact Sarah Bormann, sbormann@computerhistory.org.

Talking to the Future: October 12, 2017

- Program for Title I high school students (10th–12th grade).
- Lunch and transportation reimbursement provided.
- For more information, contact Stephanie Corrigan, scorrigan@computerhistory.org.

Family Workshops

- Saturday, July 15—Make Software Family Workshop
- Saturday, July 2—Lights, Circuits, Action! Family Workshop
- Saturday, August 26—Make Software Family Workshop
- For more information, contact Emily Stupfel, estupfel@computerhistory.org.

Computer History Museum

1401 N. Shoreline Blvd.
Mountain View, CA 94043
650.810.1010