And she is particularly focused on getting girls involved. "A lot of times if someone is lucky enough to take a computer science or engineering course before college, they do it in high school—and a lot of data shows that girls fall out of the math-science pipeline around fourth grade," she says. "We're trying to make sure girls know that engineering and computer science are things they can be successful in."

The museum—which drew almost 1.5 million visitors last year—is doing that in part by making its engineering and computer science exhibits appealing to kids of all sorts, and emphasizing the fun and creativity involved in pursuits that are too often depicted as dry and precise. For Beall and colleague **Christopher Brown** '09, an interactive software developer working on the museum's Science Behind Pixar exhibition, opening in June, creativity is a key, if often overlooked, component of engineering and computer science.

The exhibition explores how Pixar Animation Studios merge computer science, technology, and math with artistry. Brown hopes it will encourage people to see just how creative technology fields can be.

"STEM"—science, technology, engineering, and math—"is everywhere, and I don't think people realize that. It is in the music you listen to, the car you drive, the video games you play, the sports you cheer for, the movies you watch, the advertisements you look at, the buildings you live in, the phones you call, and the computer you type on," says Brown. "Almost no meaningful product was built solely from one domain of knowledge. Most things require a team of artists, designers, engineers, scientists, mathematicians, and more."

Activities in the museum are also influenced by the notion of STEAM, a recent twist on STEM that adds art to the mix. "It's the new push, incorporating elements of design. And that's important. If you're designing a car, it has to look good or no one is going to buy it. It's the human dimension of design," says Beall.

Vital to drawing kids into engineering and computer science is designing accessible, engaging exhibitions, both say.

"We're really cognizant about the language we use," says Beall. "When we say we're developing engineering projects, we don't say 'build,' we say 'create,' because create is a word girls already relate to from art and design."

The look of exhibition space is deliberate, too. "When you think of technology exhibits, they're gray, blue, metallic, angular—we do orange, green, purple, rounded shapes. I have a lot of things that are pink, too. The boys are going to build no matter what. But it might bring girls over who were on the fence. And it's a message to parents, too. If parents had a bad experience in math or science, they might be hesitant to take their daughters over."

The Tech Studio is expected to open next year. For now, activities are on the floor, and Beall and colleagues are soliciting feedback. They're looking into teaching both the hardware and software ends of computer science, including electronics and circuitry, subjects kids aren't typically exposed to in elementary school.

"Lydia and Chris are bringing originality, energy, and creativity to both of their fields that's transforming this museum—and the museum professionals who come to visit are really blown away by what they see these folks do," says Fontaine. Months and even years go into developing exhibits that are engaging and intuitive, thanks to prototyping, iterative design, visitor feedback, and experimentation.

"It looks simple, but there's a lot that happens behind the scenes—and that's what Lydia and Chris do," Fontaine says. ®

—KATHLEEN MCGARVEY

Pulling Teeth?

Last summer, the Harvard School of Dental Medicine gave special recognition to **John Manhold** '41, who returned to the school on the 70th anniversary of his graduation. Witness to a long stretch of the history of modern dentistry, Manhold shared many of his observations in an essay in the summer 2014 edition of the *Harvard Dental Bulletin*.

Manhold spent much of his career as a dental reformer. A pioneer in the now established subspecialty of psychosomatic, or biobehavioral, dentistry, he recalled early, skeptical reactions to his first studies. He persevered, publishing a textbook, *Introductory Psychosomatic Dentistry*, in 1956. "Dentistry was hesitant to accept my studies, while medicine and psychiatry embraced them," Manhold says. He later became a fellow in the Academy of Psychosomatic Medicine as well as president of the group.

After dental school, he returned to Rochester for a fellowship in pathology. He worked with the School of Medicine and Dentistry's founding dean, George Whipple, briefly, before serving in World

HONORED: Manhold, pictured with his wife, Kit, was recognized by Harvard School of Dental Medicine for his role as a reformer.

War II. After the war, he taught at Tufts and then at Washington University. In the mid-1950s, he left St. Louis for New Jersey, to become one of the first faculty members at the new Seton Hall College of Medicine and Dentistry. For 31 years, he remained at the school, now the Rutgers School of Dental Medicine, helping establish and leading its pathology department and serving as dean.

At Rutgers, Manhold pressed for greater integration of dental and medical education. "Numerous physical problems provide early indicative symptomatology in the oral cavity. If a dental practitioner is alert and knowledgeable, he or she is in a prime position to discern a budding medical problem," he says.

Dental and medical education have indeed grown more integrated over the years. Says Eli Eliav, director of the Eastman Institute for Oral Health, "The two professions use similar bases of knowledge and the separation between them is quickly shrinking." Faculty and residents at the Eastman Institute work closely with multiple departments within the Medical Center.

Manhold says he's "gratified" by the changes in modern dentistry. "Recognition by one's peers always is most heartwarming," he adds, "and even more so when you have been away from the profession for some time." ®　　—KAREN MCCALLY '02 (PHD)