



Paul Hoffman

EDITORS' NOTE Paul Hoffman is also the Creative Director of *Beyond Rubik's Cube*, as well as a journalist and biographer. He is the author of 11 books, most recently a memoir about the world of championship chess, *King's Gambit: A Son, a Father, and the World's Most Dangerous Game*. Hoffman's first biography, *The Man Who Loved Only Numbers: The Story of Paul Erdős and the Search for Mathematical Truth*, was an international best-seller. It was published in 16 languages and received the Rhone-Poulenc prize for best science book of the year. Hoffman is the recipient of the first National Magazine Award for feature writing. He was the long-time President and Editor in Chief of *Discover* magazine, the President and Publisher of *Encyclopaedia Britannica*, and, more recently, the Editorial Chairman of the video-interview website *BigThink*. He is a noted expert on the public understanding of science, and has advised NASA and others. Hoffman, who was elected to the American Academy of Arts and Sciences, graduated summa cum laude and Phi Beta Kappa from Harvard College. He has appeared on *Late Night with David Letterman* and *The Oprah Winfrey Show*. He is co-owner of two Brooklyn restaurants, *Rucola* and *BrisketTown*, and is an investor in *RockPaperRobot*.

ORGANIZATION BRIEF Liberty Science Center (LSC.org) is a 300,000-square-foot learning center located in Liberty State Park on the Jersey City bank of the Hudson near the Statue of Liberty. Liberty Science Center houses 12 museum exhibition halls, a live animal collection with 110 species, giant aquariums, a 3D theater, the world's largest IMAX Dome Theater, live simulcast surgeries, a tornado-force wind simulator, K-12 classrooms and labs, and teacher-development programs. More than 650,000 students, teachers, and parents visit the Science Center each year, and tens of thousands more participate in the Center's off-site and online programs.

What is the heritage of the Liberty Science Center and has its mission remained consistent?

Bringing Science to Life

An Interview with Paul Hoffman,
President and Chief Executive Officer,
Liberty Science Center



A young student at a
Liberty Science Center Summer Camp

Since we opened our doors in 1993, the mission has been to inspire the next generation of scientists and engineers, but it has evolved recently. Our mission now is to inspire the next generation of scientists, engineers, and tech entrepreneurs. Our world has become an interesting place where companies like EY and JPMorgan, which are both represented on the board of Liberty Science Center and generously support our efforts, have become technology companies.

The whole world is a different place now. Every company needs people that are highly skilled in programming, web design, and data mining. Even if one isn't a pharmaceutical company or an energy company, having a technologically sophisticated workforce is essential.

What approach do you take in addressing that mission?

We are the largest cultural institution in New Jersey by attendance – we have more than 650,000 guests per year and we're the largest interactive science center in the New York/New Jersey Metropolitan area.

Every kid is born a scientist, meaning they have a natural curiosity about the world. Unfortunately, something in our formal education system, and maybe in our society, all too often snuffs that curiosity. Card-carrying scientists and technologists carry that curiosity into adulthood and end up working in those fields.

At Liberty Science Center, we try to keep that spark alive for the younger kids. As we get into high school youth, for instance, we're directly introducing them to possible careers in science, technology, engineering, healthcare, computer programming, and robotics. We try to provide whatever extra mentoring they might need to stay in the pipeline for those careers.

Is there a lack of emphasis on these programs in the schools, and can more be done to bring them to the forefront?

More is starting to be done. A number of states have gotten together and created the Next Generation Science Standards, which boil down to learning science by doing science. If I'm going to teach a kid what gravity is, I should not just stand in the front of a room preaching about how all objects fall; I should drop an object.

All science is best learned by doing it; that stimulates the imagination and makes the concepts much easier to grasp. These are not theoretical concepts; these are concepts about how the real world works so we should learn them by doing actual science.

School systems that have moved in that direction have had much better outcomes, and that's our bread and butter at Liberty Science Center. We probably have more classrooms and labs than any other science center in the U.S. The 250,000 K-12 schoolchildren who come here annually don't just come for the run of our exhibition halls; they come for guided, inquiry-based laboratory experiences that are age appropriate.

Even kindergartners are doing elementary science here, while high school kids are doing very sophisticated science and, because they are engaged, there are more kids discovering that science is exciting.

How challenging is it to design programs to address such a wide age range?

There are a lot of moving parts to what we do but we have specialists that conduct the programs for pre-school kids, for instance. We also rely on many outside experts in the New Jersey/New York community from institutions such as Stevens, Rutgers, and Princeton, as well as doctors from Barnabas, Atlantic Health, and Columbia Presbyterian. Many people support our mission and come here to work with our student populations.

Do you have to create many of the exhibitions yourselves to cater to your cutting-edge, innovative thinking?

Yes. The largest exhibition we created, in partnership with Google, is called *Beyond Rubik's Cube*. The puzzle cube just hit its 40th anniversary. It's a large exhibit that has robots to which visitors can hand cubes to solve – one doesn't have to be able to solve Rubik's Cube oneself.

Rubik's Cube is a cultural icon. There are one billion of them in the world, so we did an exhibit that teases out the mathematics and the engineering behind the cube. It's hard to guess the Cube's internal mechanism that allows it to so seamlessly twist but not fall apart.

When the exhibition opened, the Empire State Building was lit in the colors of the Rubik's Cube. Now this exhibit is being loaned to a few science and art museums in China for a year.

Exhibition design is not an easy business. Our exhibits have to be interactive and immersive – we're not a museum where there are beautiful artifacts mounted on a wall. We have 650,000 annual visitors banging away on our exhibits, so there is a lot of wear and tear. ●