

# Connect with

**The creative paths  
future designers and  
architects are following  
to their professions**

In an era when arts programs are not a priority in elementary and high schools, it can be difficult for kids to connect with design—or even realize they have an affinity. This can lead to missed opportunities and a lifetime of frustration. However, a growing number of programs are popping up to supplement well-intentioned STEM (science, technology, engineering, and mathematics) curriculums and fill in gaps created by a lack of funding for the arts.

Design museums frequently are tasked with closing this learning loop through family programs, school programs, educator resources, and lesson plans. According to Nina Boccia, interim creative director, Design Exchange (DX) Canada's Design Museum in Toronto, a 2018 report by People for Education, an independent Canadian organization, found that only 4 percent of Ontario, Canada, elementary schools that responded to a survey have an annual arts budget of more than \$5,000 and 27 percent have a budget of less than \$500 for arts per year.

"Recently, the United States Congress passed a bill that recognizes architecture as a STEM subject," adds Boccia. "This will allow state governments to modernize their curriculums and increase the resources available for architecture education at a high school level. It's a promising step forward for many organizations that provide K-12 programs—in and out of the traditional learning environment—like DX." Currently, the museum offers programs for kids, educators, and home schoolers with rich and diverse topics like biomimicry, accessibility, urban planning, robotics, and sustainable fashion.

"Whether the participants end up in design practice or a completely different industry, the fundamentals of creative thinking and problem solving that are taught through visuals, lectures, and hands-on activities provide a deeper understanding of how projects, products, services, and systems evolve from concept to realization," explains Boccia.

At DX Canada's Design Museum, creative thinking and problem solving are taught via visuals, lectures, and hands-on activities. (Image: Design Exchange)

# ing Kids



## Mixing Generations and Demographics

As more schools are looking at interdisciplinary education with STEM and STEAM—the “A” stands for arts—design thinking serves as a common vocabulary for all the fields. That’s why Ruki Neuhold-Ravikumar, director of education at Cooper Hewitt, Smithsonian Design Museum in New York, thinks it’s important to influence the curriculum early. “To be able to think critically and solve problems creatively is no longer a special skill set—it’s a new life skill,” she says. “So, making the transition to thinking on your feet and being able to relate to users of the solutions that you design—all of those concepts are taught best through design. This is why we, as a museum, are working on this with schools, the general public, and various organizations to help kids relate to a topic that they don’t typically get a lot of exposure to.”

While many museums take an age-based approach to education that assumes the kid is the beginner and the adult is the advanced learner, Neuhold-Ravikumar observes that in the case of design, that’s not always true. Some adults, even though they’re surrounded by design every day, could not articulate what it is and could not speak to it at a level where they’re comfortable. So, almost every weekend, Cooper Hewitt has programs open to audiences of all ages. “If you bring a child, four is a good age to start,” notes Neuhold-Ravikumar, “but two-year-olds are mesmerized and have done pretty well in our programs. Some of our older audiences are in their 90s and still very engaged. All ages are learning at the same time. It really creates a great public conversation about design.”

The free Hip Hop Architecture Camp—a one-week intensive experience, designed to introduce under-represented youth to architecture, urban planning, creative placemaking, and economic development—is based on the “4C’s”: creativity, collaboration, communication, and critical thinking.

In New York, during National Design Week in October, the museum’s Teen Design Fair typically attracts more than 400 teenagers from all over the city; teachers have bussed kids in from as far away as Kansas City, too. “It really connects us with a very, very diverse population,” says Neuhold-Ravikumar. “We have 40 designers in our tent and students go from table to table speaking to them about their career path and getting advice.” In addition, university representatives are on hand to answer questions about cost and admissions criteria.

## When Hip Hop Meets Architecture

There are many programs across the country that introduce design to kids, but, according to architect Michael Ford, those programs still result in low numbers when it comes to increasing diversity in the design professions. “Less than 3 percent of architects are African-American. That’s why I brought this culturally relevant idea of hip hop into the equation,” he explains.

The self-described “Hip Hop Architect” began drawing connections between hip hop and architecture with his graduate thesis, titled “Hip Hop Inspired Architecture and Design,” for the Masters of Architecture degree he earned from the University of Detroit Mercy. Ford was born and raised in the city of Detroit and currently resides in Madison, Wisconsin, where he owns BrandNu Design.

The Hip Hop Architecture Camp is a one-week intensive experience, designed to introduce under-represented youth to architecture, urban planning, creative placemaking, and economic development through the lens of hip hop culture. Launched in 2017, the free camp is based on the “4C’s,” which are creativity, collaboration, communication, and critical thinking. Autodesk has signed on as national sponsor.

Campers are paired with architects, urban planners, designers, community activists, and hip hop artists to create unique visions for their communities that yield physical models, digital models, a Hip Hop Architecture track, and a music video summarizing their designs. Young people print—and read (not just listen to)—lyrics from their favorite tracks in order to identify patterns and the structure of that song. From there, they design cities and buildings that have the same patterns discovered in the music.

“If the music is talking about abandoned buildings, drugs, or poverty, we challenge young people to create a program in space that solves the issue within the song, and the aesthetics of that space is based on the rhythm and patterns that we extract visually from the music,” says Ford. “That’s the premise for the camp.”



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**1.** Cooper Hewitt offers hands-on creative programs for kids of all ages.  
(Image: Cooper Hewitt)

**2.** Hip Hop Architecture campers are paired with architects, urban planners, designers, community activists, and hip hop artists to create unique visions for their communities.  
(Image: The Hip Hop Architecture Camp)

**3.** Each subject at Design Thinking Academy is infused with project-based learning.  
(Image: Design Thinking Academy)

**4.** The Hip Hop Architecture Camp challenges kids to solve issues addressed in lyrics—like poverty and abandoned buildings—with their original design.  
(Image: The Hip Hop Architecture Camp)

**5.** Student creativity is at work in the halls of Design Thinking Academy.  
(Image: Design Thinking Academy)

**6.** Design Thinking Academy's instructional model leverages the power of creativity to build students' confidence.  
(Image: Design Thinking Academy)

*“To be able to think critically and solve problems creatively is no longer a special skill set—it’s a new life skill.”*

—**RUKI NEUHOLD-RAVIKUMAR, COOPER HEWITT, SMITHSONIAN DESIGN MUSEUM**



## Design Education Is About Building Things

The Architecture Foundation of British Columbia (AFBC) has an overall mandate to educate the general public about matters of the built environment. This passion is behind its plans to integrate architecture programming into the kindergarten and primary school curriculum throughout British Columbia, Canada.

“Having architects, designers, and landscape designers come into the classroom creates an awareness of what it takes to do that kind of work and it teaches them about all kinds of options, opportunities, and choices,” says Sehr Bokhari-Latif, from the Department of Interior Design at The Art Institute of Vancouver (part of LaSalle College Vancouver), as well as partner of StudioTrio Design and director of AFBC.

According to Bokhari-Latif, “The sooner you start the children to become aware of their context of the built environment, the sooner they are able to engage in these matters and able to facilitate, in many cases, what needs to be done to make the built environment better.”

AFBC’s architecture curriculum, which will be available for educators to use in and out of the classroom, is currently in the planning stages. “Kids absorb so quickly—they are like sponges,” observes Bokhari-Latif. “So, I think it’s really a question of content rather than time.”

One thing is sure: “We will be engaging students to make things with their hands! Hands-on training has kind of disappeared from curriculums all over the world,” she adds. “It’s become very technologically oriented, and my personal view is that we are losing creative thinking and thinking outside the box when we are doing more computer-based learning. Design education is all about building things.”

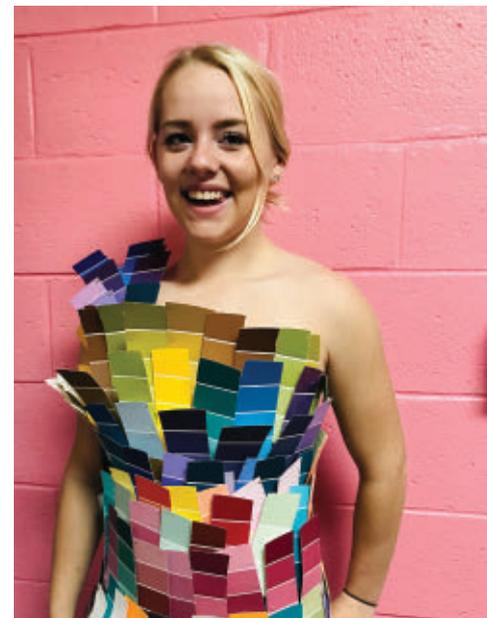
## Teaching Confidence and Autonomy

Mastering the art of design thinking provides students from all neighborhoods with advantages they will enjoy for a lifetime. The Design Thinking Academy was founded in 2015 with the goal of creating an educational experience that prepares students with these 21st century skills. “Many of our students are from under-served populations and they experience socioeconomic hardship,” says Stephanie C. Silverman, head of school and principal at the Design Thinking Academy in Newark, Delaware. The school’s instructional model provides them with an extra boost, leveraging the power of imagination and creativity to build their confidence and autonomy.

Students choose one of five creative career “pathways”: computer science, entrepreneurship, art & design, media, or architectural engineering. Two additional career pathways will be added in the future: game design and audio engineering. Educators apply design thinking to core subject areas and also use it as an interdisciplinary “glue” that frames the overall teaching approach. “Our curriculum is embedded with design thinking,” explains Silverman. “Each subject is infused with project-based learning and creative problem solving to make learning authentic, fun, and experiential.”

A standalone school, the Design Thinking Academy (DTA) is not a CPO (charter proliferation organization). However, it is clearly thriving on its own and has been awarded a \$10 million grant from the XQ Institute. “We are one of the original 10 XQ Superschools,” states Silverman. The list of colleges that DTA students have been accepted to is growing. “We are very proud to add MIT to the list.” She adds, “Many of our students go on to pursue creative careers in the pathway they chose here at DTA.”

Paint sample strips become high fashion in the hands of students at Design Thinking Academy.  
(Image: Design Thinking Academy)



## Executing Ideas

LEGO toys have been sparking the imagination of future designers for nearly 80 years. Playing with LEGO has always been fun. In fact, the name LEGO is actually an abbreviation of the two Danish words “leg godt,” meaning “play well.” Now, thanks to The LEGO Group’s commitment to use sustainable materials in core products and packaging by 2030, it also provides educators and parents with a teachable moment about sustainability and social responsibility. Production has started on a range of sustainable LEGO elements made from plant-based plastic sourced from sugarcane. The new sustainable LEGO “botanical” elements will come in varieties, including leaves, bushes, and trees.

Despite fears that we’re headed toward a digital-only world, the modular LEGO brick launched in 1958 continues to thrive and provide a tactile experience for children. Today, the company’s mission “to inspire and develop the builders of tomorrow” includes the introduction of products designed to open up early math, science, and language skills for young children. LEGO has even introduced Coding Express, a fun and tactile way to inspire early learners to explore coding concepts.

And, when young minds begin taking investigative steps toward creative career options, there are still more resources to help guide their curiosity. The American Society of Interior Designers (ASID) is among the professional organizations participating in Careers Building Communities, a platform designed for students, educators, and other individuals to explore career paths in all facets of the real estate industry—from architecture and interior design to construction, engineering, management, and finance. The platform was created to provide future talent with information on education and employment within each sector and to connect them with participating organizations, which can help identify opportunities and next steps that can lead to a rewarding career.

Whether in the classroom or at the museum, group activities that expose kids to the arts help develop confidence, creativity, and collaboration with lasting benefits. Connecting with design professionals early in life broadens horizons and helps the future designers and architects of the world find their way to their professions. These same connections also benefit kids who go into other fields. Having an understanding of the world through a design lens can only enhance one’s professional experience, regardless of the industry they enter. ●

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## Getting Involved



### The Hip Hop Architecture Camp

Designers, architects, real estate developers, educators, hip hop artists representing all the elements, (Graffiti, Djing, MCing, Bboy/BGirl), urban planners, and community leaders are invited to assist. After applicants complete the form on the website they will be contacted when a camp is scheduled near their city. [www.hiphoparchitecture.com/volunteer](http://www.hiphoparchitecture.com/volunteer)

### DX Canada’s Design Museum

DX regularly works with creatives, including designers, architects, technologists, and artists. Some, including Jason Logan, Libs Elliott, and little dada, have served as guest speakers and teachers for classes. Others have entirely led workshops and activities, including Swave Studios for a partnership with World Industrial Design Day (from the World Design Organization), Kids Learning Code (from Canada Learning Code), and more. Get in touch via email at [info@dx.org](mailto:info@dx.org).

### Design Thinking Academy

DTA welcomes involvement with programming and opportunities for students to interface with creative professionals as they plan for college and careers. Also, DTA seeks relationships with local companies that would like students’ help in solving their business or organization’s design challenges. To establish a community partnership, program, or relationship with the school, contact Noelle Picara, community partnerships & programs director, at [noelle.picara@dtak12.de.us](mailto:noelle.picara@dtak12.de.us), or call 302-292-5450.

### Cooper Hewitt, Smithsonian Design Museum

Volunteers are encouraged to get in touch about local and national programs, such as the Teen Design Fair during National Design Week in October. More than 400 teens come from New York and beyond to meet designers and gain career inspiration and advice. [www.cooperhewitt.org](http://www.cooperhewitt.org)

### Architecture Foundation of British Columbia

AFBC is on a renewed path of inclusion, education, and engagement and will periodically seek new board members from the architecture and design community. Contact Jim Toy, AFBC board chair, at [board@architecturefoundationbc.ca](mailto:board@architecturefoundationbc.ca).

### Careers Building Communities

Learn about student membership opportunities at participating organizations and more at [www.careersbuildingcommunities.org](http://www.careersbuildingcommunities.org).