

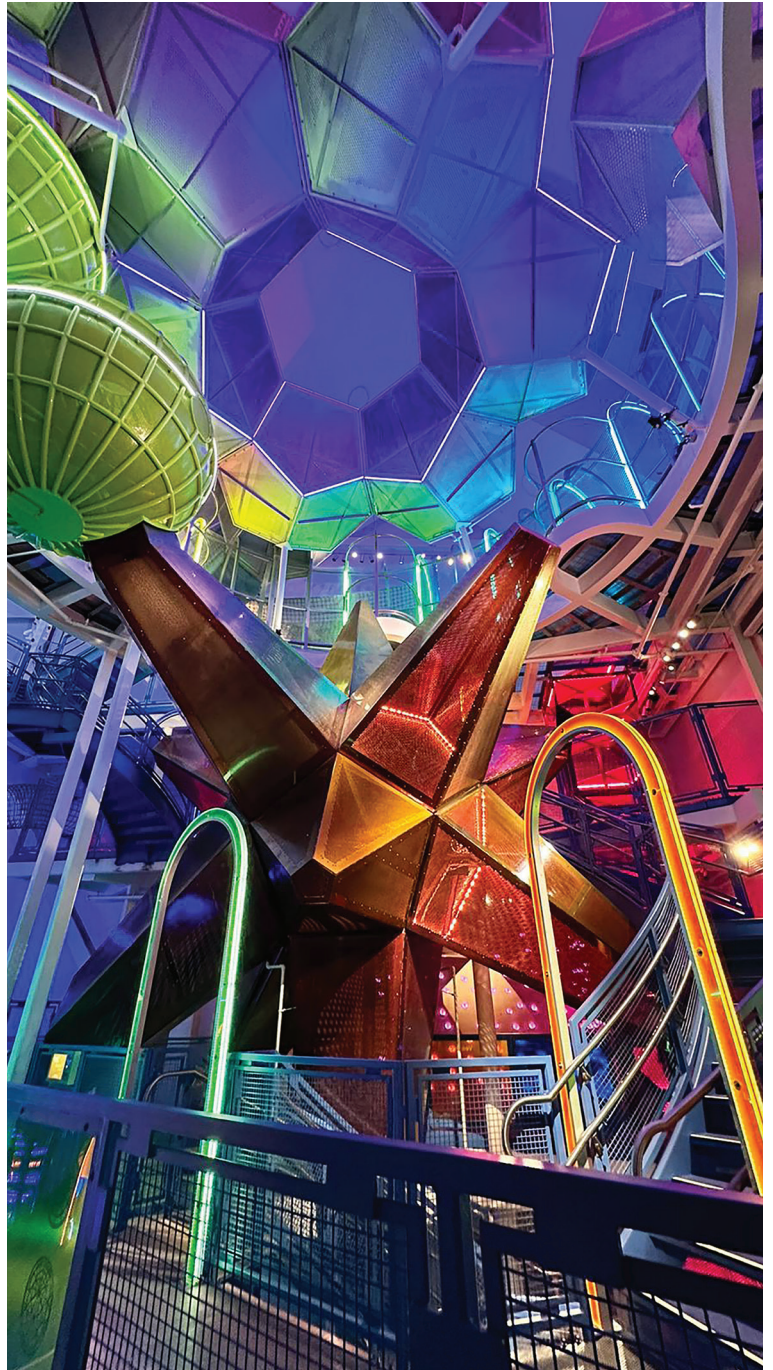
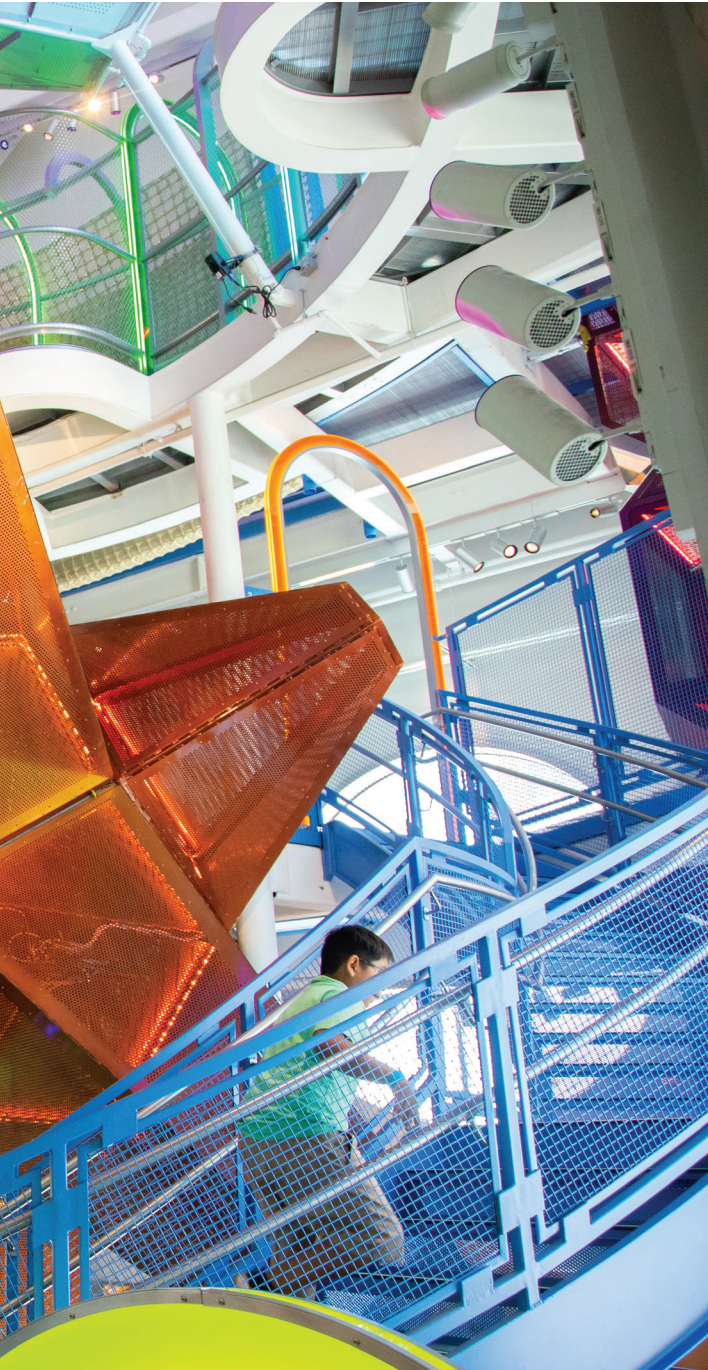


Photos: Scott Weaver

KEEP YOUR HEAD IN THE CLOUDS

Atypical design allows everyone to have fun at La Nube

By Michele Zimmerman



What were your childhood dreams? Flying high above your hometown in a home-made airplane? Exploring the depths of a mysterious cave? Becoming a rockstar? STEAM discovery center, La Nube, in downtown El Paso, TX, makes such ambitions more realistic for people of all ages, abilities, and cultures. With the goal of encouraging imagination through merging the educational aspects of a science center and children's museum experiences, the four-story, cloud-shaped institution promotes “Blue Sky

Left: The indoor climber featured in a neurotypical light setting.

Right: In low-stimulus mode, exhibit lighting shifts to a blue color scheme.

Thinking”—a notion that the sky connects everyone and that the possibilities are limitless.

The playful museum comprises nine themed learning zones that blend science, technology, engineering, art, and math with interactive exhibits. These include the Anything's Possible Climber, which allows visitors to brush up on math skills while climbing the tallest, inclusive indoor climber in The Lone Star State; Our Sky, an exploration of the nighttime sky and weather patterns; Desert Bloom, a quiet, shoe-free zone



for infants and toddlers; Follow Your Instincts, an area for role playing and constructing animal habitats replete with a glow-in-the-dark cavern; Fly High, for learning about gravity through a paper-airplane-making-station and an Air Space Testing Facility; Puzzle It, with solvable problems in English and Spanish; Making Waves, a space for recording music, videos, and learning to code; Flow, a water-play center; and finally, Challenge It, for learning about robotics, 3-D printing, and more.

With a price tag of \$72 million, the private-public partnership project of the El Paso Community Foundation, the City of El Paso, and other community stakeholders, opened its doors in 2024 after parents, educators, therapists, and other community members had a hand in sharing expertise to influence the space along with exhibit design firm Gyroscope and architectural firm Snøhetta. The result: a facility that provides thoughtful accessibility such as bilingual signage, topographical maps for the visually impaired, Sensory Kit backpacks and

Desert Bloom caters to the youngest crowd visiting La Nube.

items like noise-canceling headphones, Sensory Cozy Rooms throughout the museum to help reduce overstimulation, and regular sensory-friendly lighting hours that feature softer lights with reduced brightness. The museum also created weekly special events featuring book characters, National Park Service employees, and veterinarians.

The Playful Particulars

It's only natural that a unique environment such as La Nube, which is so committed to its theme that even its website features the baby photos of its CEO and other team members, would have a lighting design equally as detailed and fit for inclusive play. Thus, design firm Available Light was brought onto the team in 2019. "[We were] first brought onto the project as part of the exhibits team," explained Available Light Principal Rachel Gibney. "As the project evolved, our role grew, and we were subsequently integrated into the architects' team as well. Our expanded responsibilities then included



lighting design for architecture, exhibits, and the control systems integrating these elements. This comprehensive approach allowed us to deliver a cohesive and engaging lighting design that met the needs of the project.”

Various challenges arose “in conceptualizing and actualizing this project, particularly around the complex interactivity and desire to remain accessible,” added Available Light Principal Ted Mather. “For instance, [the firm] needed to be educated as to what ‘low stimulus’ meant, and how one could design lighting that could accommodate those with special needs. Typically, the aesthetic of a children’s museum is bright, loud, and intended to be as stimulating as possible—and to be frank, it’s a rare client request that the design team initially sets out to accommodate accessibility lighting design strategies in its brief.”

Regularly scheduled sensory-lighting hours occur each weekend at the museum.

To illuminate the 29,000 sq ft of exhibit space, the team implemented a flexible and dynamic system with DMX-controlled static-white and color-changing trackhead fixtures (by Lighting Services, Inc.) located above and integrated within exhibit components including the multi-story climber. The system, with multiple layers of control, allows for static looks, pre-programmed effects, interactive lighting elements—and the accessible “low-stimulus” mode.

“During several pre-set times, as well as on-demand on an exhibit-by-exhibit basis, museum staff can modulate the lighting to ‘low-stimulus’ mode, which adjusts the lighting in multiple ways to make the exhibit more friendly to those with neurodivergent needs,” explained Mather. “In general, light levels decrease slightly and exhibits with saturated colors either desaturate slightly or shift towards blue. Exhibit galleries with significant interactive elements also change but are designed to do so in a manner that is not exclusionary. For instance, one location includes a mirror ball that, in [regular] operation, is triggered via an individually assigned RFID [radio-frequency identification] device. Upon check-in, the mirror ball starts spinning and lights aimed at the ball turn on for several seconds, then turn off—yielding a visitor reward. Rather than removing this effect, which would exclude those with special needs from a delightful moment, the design simply removes the interactive element, the mirror ball constantly spins. In this way, an individual is finding fun and excitement through the effect, but [the effect] does not suddenly stop—which could result in adverse visual stimuli.”

While museums are exempt from adhering to specific lighting energy codes, the team continually referenced local and national energy codes throughout their process at La Nube, ensuring that the sophisticated system took not only the well-being of neurodivergent guests into consideration but also the well-being of the planet. The team was able to complete the project with an exhibit lighting power density of less than 1 watt per sq ft.

Inside Out

The curved shape of the center presented its own challenges; it’s not every day that designers must illuminate a cloud. “The building façade design presented a fantastic canvas for the [lighting] design team to create a truly breathtaking visual experience,” said Gibney. To create a wonder-inspiring experience for guests to match the experience they have inside the building, as well as connect the



structure to the El Paso skyline and community, the team sought to craft a twinkling, “starry night” theme outside. Using drawings, a full-scale mock-up, and fiber optic lighting solutions (by UFO Lighting) with three different fiber tail sizes (0.75, 1, and 1.5 millimeters), the team crafted an intricate pattern with over 2,100 points of illumination to recreate a constellation of stars. “From the precise calibration of light intensity to ensure an even distribution of illumination, to the careful placement of each fiber optic point, every element was carefully considered to create a cohesive and engaging visual effect,” explained Gibney. “To control the fibers and bring the ‘stars’ to life, DMX control was used. This allowed for programming and presetting different twinkling movements, which can be tailored to respond to specific events or programs happening in the city.”

From its surreal outside façade to its whimsical interior, there’s no question that La Nube is a place made by and for dreamers, and that with the right design team—the possibilities are, indeed, limitless. ©

Fiber optics create a twinkling-star effect on the museum’s façade.

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