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CASE STUDY

Fort Worth Museum of Science and History Playground – A Collaborative Journey

PREPARED BY WHIRLIX DESIGN INC.

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INTRODUCTION

When creative minds unite to redefine the concept of play, extraordinary things happen. This was the case at the Fort Worth Museum of Science and History, where a team of innovative professionals transformed a neglected water play area into Galaxy Park Playground, an interstellar-themed oasis of fun and education. Galaxy Park isn't just a playground; it's a testament to the power of collaboration. The project saw the museum, Whirlix Design, Open Space Texas, and Valley Quest Design join forces, each bringing their unique expertise to the table.

Their combined efforts created an awe-inspiring space where children and families can explore the wonders of the universe. Every step of the project involved careful planning, teamwork, and creativity. From overcoming site challenges to ensuring durability and educational value, the story of Galaxy Park highlights the transformative power of collaboration in bringing ambitious visions to life.

This case study explores the journey of creativity and teamwork that brought Galaxy Park to life. By blending educational themes with innovative design, Whirlix Design, Open Space Texas, and Valley Quest Design transformed the museum's vision into a play space where children can learn and explore the wonders of the universe.

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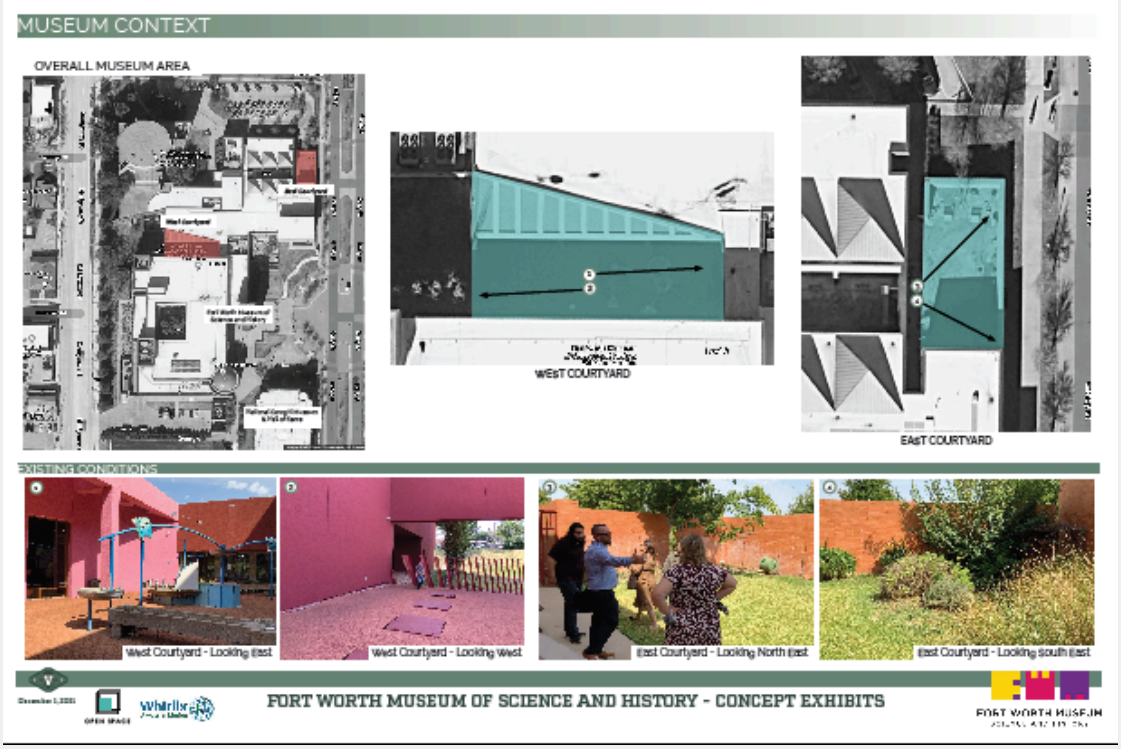
The Project Origins and Vision

The journey to create Galaxy Park began in August 2021, when David Rushing, Whirlix Design's Business Development Manager, was invited to host an engineering workshop at the Fort Worth Museum of Science and History. This wasn't just any event; it included a tour of Dream Park, one of Whirlix Design's landmark projects, and a premier inclusive play space that had quickly gained attention for its thoughtful design and innovative features.

The tour sparked a discussion with museum leaders, who shared a vision for transforming their own 20-year-old water play area. Originally designed as a water feature for families, the area had fallen into disrepair over the years, and museum staff felt it no longer met the needs of their visitors or reflected the museum's mission to inspire curiosity and learning. They imagined a new space—one that would be both educational and interactive, a venue that could draw in children and families alike. In short, they wanted something that would go beyond traditional playgrounds by offering multi-functional features, providing an educational dimension, and ultimately adding value to the overall museum experience.

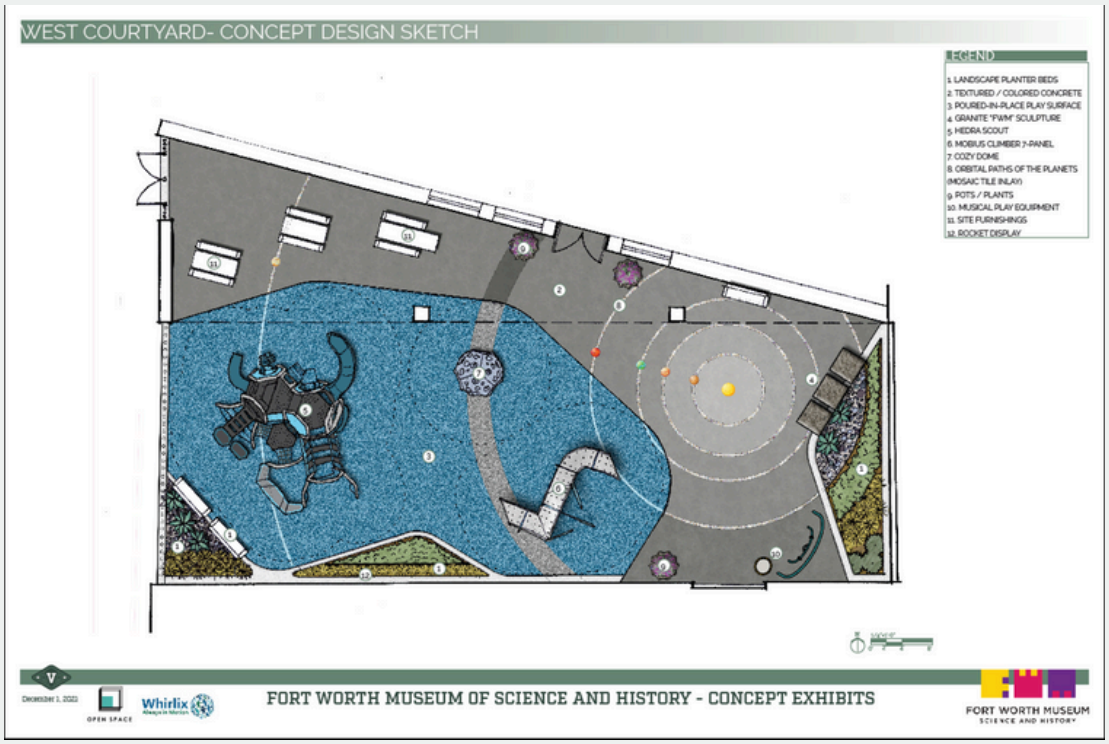
The Project Origins and Vision (cont.)



The vision for Galaxy Park was thus born. The museum wanted to create a space where play met learning, with a theme that would captivate visitors and ignite a sense of wonder. In line with the museum's emphasis on science, technology, and discovery, a space-themed playground felt like the perfect choice. The museum envisioned play structures that would mimic elements of the solar system, such as planetary orbits and asteroid fields, allowing children to explore these concepts through play.

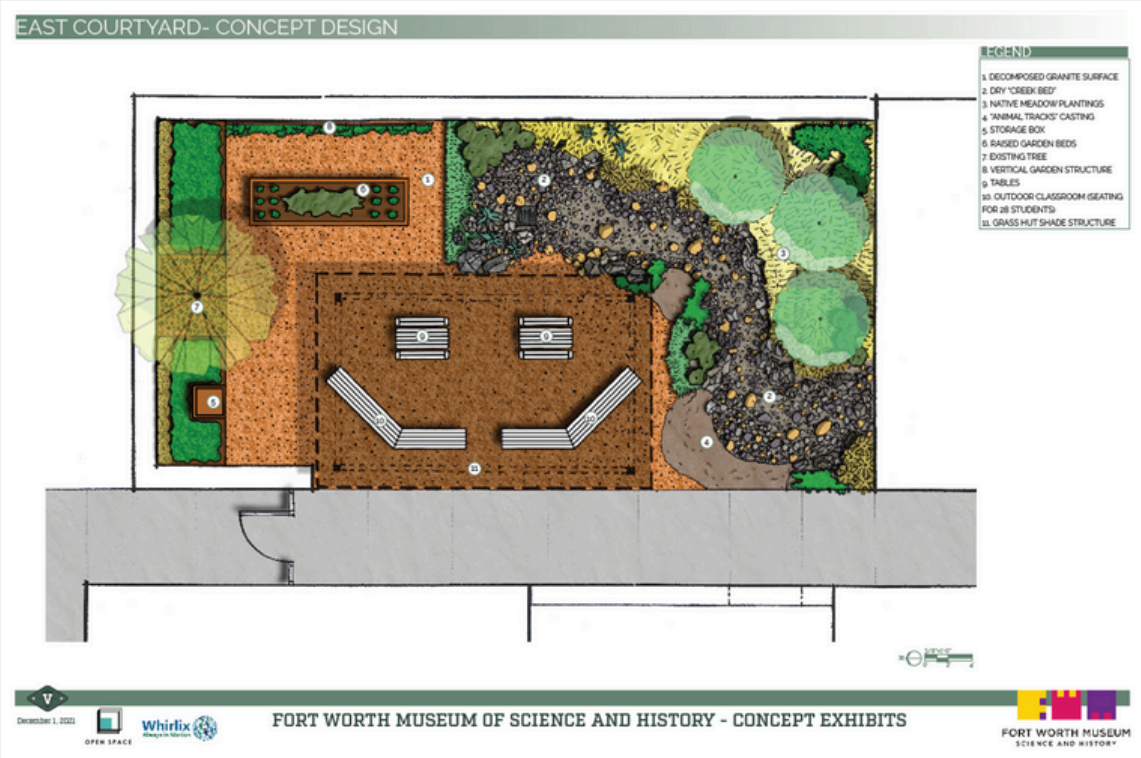
The Project Origins and Vision (cont.)

But the vision went beyond thematic elements. The museum sought a durable, long-lasting space that could serve as a venue for events, birthday parties, and special programming. This would not only offer a fresh attraction for visitors but also serve as a reliable revenue source to support the museum's broader educational goals. They imagined a playground that could easily adapt to different uses, combining the durability needed for everyday play with the flexibility to accommodate various functions.



This ambitious vision was the perfect challenge for Whirlix Design and its collaborators. David Rushing, along with Open Space Texas and Valley Quest Design, quickly recognized the potential of the project and set to work on bringing it to life. Galaxy Park would be more than just a playground; it would be a truly interactive, multi-functional, and immersive space that extended the museum's mission of education through experience. The team's goal was not simply to build a playground but to create a place where children and families could explore the wonders of the cosmos while engaging in active, educational play.

The Project Origins and Vision (cont.)



As the collaborative design process unfolded, with the playground design expertise of Whirlix Design and innovative site solutions by Open Space Texas and Valley Quest Design, the vision for Galaxy Park became more refined, focusing on creating a place that would remain a fixture of the museum for generations. The final goal was clear: to craft a beautiful, durable, and versatile space that would captivate visitors for years to come, bringing the universe a little closer to young minds in Fort Worth.

CHALLENGES

Transforming Galaxy Park was not without its challenges. The project team encountered several significant obstacles that required careful planning and innovative problem-solving.

Limited Site Access

The playground's location within the museum campus made it difficult to transport heavy equipment and materials. Access was restricted, requiring the team to devise creative solutions for bringing in the resources needed for construction.

Sun Exposure

With the playground facing west, it was exposed to intense afternoon sunlight, creating a challenge in keeping the space cool and comfortable. The Texas sun is unrelenting, and the team needed to ensure the playground would remain usable even during the hottest times of the day.

Space Constraints

The area designated for the playground was relatively narrow, limiting design flexibility. This meant that the team needed to carefully plan the layout to maximize both play opportunities and safety, ensuring every piece of equipment fit seamlessly into the theme.

Playground Durability

Given the museum's high visitor numbers, Galaxy Park needed to be resilient. The materials used had to withstand wear and tear, particularly as the playground would serve as a venue for special events and birthday parties as well as regular museum-goers.

Each of these challenges presented opportunities for Whirlix Design and its partners to showcase their creativity and problem-solving abilities. By embracing these obstacles, they were able to deliver a space that exceeded the museum's expectations.

SOLUTIONS

To overcome these challenges, the team implemented several innovative solutions that balanced aesthetics, functionality, and durability.

Temporary Pathways for Access

To address the limited site access, the team constructed a temporary pathway leading from the main road to the construction site. This pathway allowed construction crews to move equipment and materials into the area with minimal disruption to museum operations. It also provided a safer route for workers, ensuring the process remained on schedule.

Innovative Shading Solutions

To combat the intense sun exposure, the teamn collaborated with engineers to develop custom anchor points on the museum building. These anchor points allowed for the installation of SkyWays® shade structures, which provide ample shade without taking up ground space. The structures were carefully positioned to create comfortable shaded areas across key play zones, ensuring that visitors could enjoy the playground regardless of the weather.

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SOLUTIONS

Durable Materials with Cosmic Flair

For long-lasting durability, the project team chose poured-in-place rubber surfacing that could handle high foot traffic and harsh weather conditions. Valley Quest Design integrated space-themed colors and textures to enhance the cosmic theme. In-ground lighting with planet decals added an extra layer of excitement, especially in low-light conditions. By selecting materials that were both visually appealing and resilient, the team ensured Galaxy Park would remain vibrant and welcoming for years to come.

Space-Smart Design

The narrow space challenge was met with a strategic design approach. The team chose equipment that complemented the cosmic theme, such as custom asteroid steppers, a Cozy Dome® designed to resemble an asteroid, and a Mobius® Climber that simulates a spacewalk. Each feature was placed to encourage exploration and movement within the constraints of the available space. The design included safety surfacing with embedded planetary orbits, turning every step into a learning experience while allowing maximum room for play.

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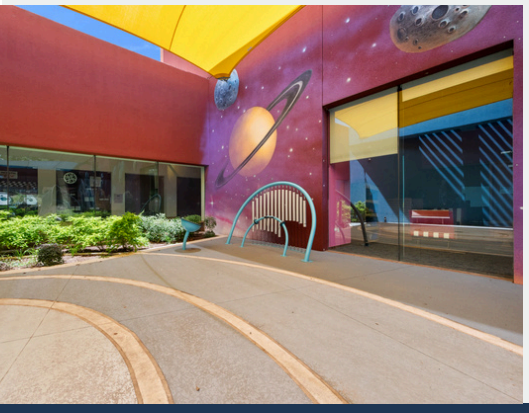

Through consistent communication and collaboration, Whirlix Design, Open Space Texas, and Valley Quest Design successfully addressed each challenge, creating a playground that not only meets the museum's goals but also captivates its visitors.

CUSTOM FEATURES

In crafting Galaxy Park, the team aimed to create a space that combines fun and education, making every element a part of a cosmic exploration. By carefully designing play structures and incorporating themed features, we transformed ordinary play into an engaging journey through the solar system. From planetary orbits to asteroid climbers, every feature of Galaxy Park invites children to experience the wonders of space in a playful way.

A standout feature is the playground's to-scale planetary orbits, where the safety surfacing doubles as an astronomical model. Here, kids can trace the paths of planets and learn about distances in our solar system, all while playing. These scaled representations allow children to "orbit" like planets, providing an intuitive understanding of space and offering opportunities for impromptu science lessons during playtime.

CUSTOM FEATURES

Themed playground equipment adds to the galactic adventure, with each piece carefully chosen to enhance the space exploration experience. The Cozy Dome®, for instance, resembles an asteroid and offers a quiet, sensory-friendly spot for kids. The Mobius® Climber challenges balance and coordination, simulating a spacewalk experience, while the Hedra® Scout provides a futuristic structure for children to explore. Completing the scene, custom asteroid steppers are positioned throughout the playground, helping young astronauts develop motor skills as they navigate the “asteroid field.”

Even the landscape and hardscapes of Galaxy Park are designed with a cosmic theme in mind. Valley Quest Design used durable materials like cast-in-place concrete and poured-in-place rubber to create smooth, accessible surfaces that reflect the colors and patterns of space. Concentric rings on the ground represent planetary orbits, and in-ground lights with planet decals bring the solar system to life. Low-maintenance, space-hardy greenery frames the playground, adding visual interest without interfering with play.

CUSTOM FEATURES

Galaxy Park’s space-hardy greenery, designed by Fowlkes, Norman, and Associates, adds visual depth and a touch of nature without disrupting play. Strategically placed planting pockets around the play areas provide a lush backdrop, while gently sloped concrete curbs separate the plants from high-traffic zones. The use of durable, low-maintenance plants ensures the landscape remains vibrant and resilient, allowing kids to focus on their cosmic adventures while the greenery enhances the overall environment.The entire design is built to withstand the excitement of young explorers while fostering a sense of wonder and curiosity about the universe.

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And finally, the "Cosmic Rodeo" wall mural commissioned by the Museum adds a unique artistic flair to the playground. This vibrant mural is designed to inspire young imaginations, the mural combines elements of the museum’s local culture with the vastness of the cosmos, creating a one-of-a-kind visual experience. The "Cosmic Rodeo" not only enhances the playground's theme but also serves as an interactive backdrop, sparking curiosity and delight among visitors of all ages.

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RESULTS

After a year, the transformation of Galaxy Park was completed in November 2022, and the playground has been a resounding success since its grand opening. The project has delivered a range of positive outcomes, benefiting both the museum and its visitors:

- **Enhanced Visitor Experience:** Galaxy Park has quickly become a favorite destination for families. The playground's cosmic theme, combined with its interactive features, provides an engaging learning experience that captivates children of all ages. By blending play with education, the playground has become a valuable extension of the museum's offerings.
- **Increased Attendance:** The addition of Galaxy Park has contributed to an increase in museum attendance, particularly for special events and birthday parties. The playground has become a sought-after venue for families looking for a unique and educational space to celebrate milestones.
- **Long-Term Durability:** The materials chosen for Galaxy Park have proven to be both resilient and low-maintenance, standing up to daily use while maintaining their appearance. This durability ensures the playground will continue to serve visitors for years to come, providing a long-term return on the museum's investment.
- **Educational Value:** Galaxy Park successfully combines play with learning, allowing children to explore features like to-scale planetary orbits and asteroid-themed climbers. This approach fosters curiosity and provides an intuitive way for children to learn about space, making the playground an educational tool as well as a recreational space.

Through a shared commitment to creativity and problem-solving, the team behind Galaxy Park has delivered a playground that is more than just a play space. It is a launchpad for imagination and exploration, seamlessly integrating with the museum's mission to inspire learning.

CLIENT FEEDBACK

The Fort Worth Museum of Science and History has expressed its satisfaction with the collaboration and outcome of Galaxy Park. According to the museum's Director of Operations:

"Galaxy Park has truly exceeded our expectations. Whirlix Design, Open Space Texas, and Valley Quest Design approached each challenge with creativity and professionalism, and the results speak for themselves. The playground is not only a fun and engaging space, but it also aligns perfectly with our mission to educate and inspire. Our visitors love it, and it has quickly become a highlight of the museum. The collaborative spirit behind Galaxy Park made this possible, and we look forward to continuing to work with this incredible team as we plan future enhancements."

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MEET THE TEAM

(From left to right)Jesse Isbell, Quincy Crow-Open Space TX, David Rushing- Whirlix Design, Andrew Cousins-Valley Quest Design, Amber Shive-FW Museum, Kristan Wells-Fowlkes, Norman & Assoc., Thomas Eatinger-FW Museum, Jeremy Blad-Valley Quest Design, Cody Andrus-Valley Quest Design

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