

STEM IN THE BAROQUE

Career Pathway-Focused Exhibition for ABQ Teens and Families

ABCWUA Board Meeting
3/22/2023

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Funding provided by:



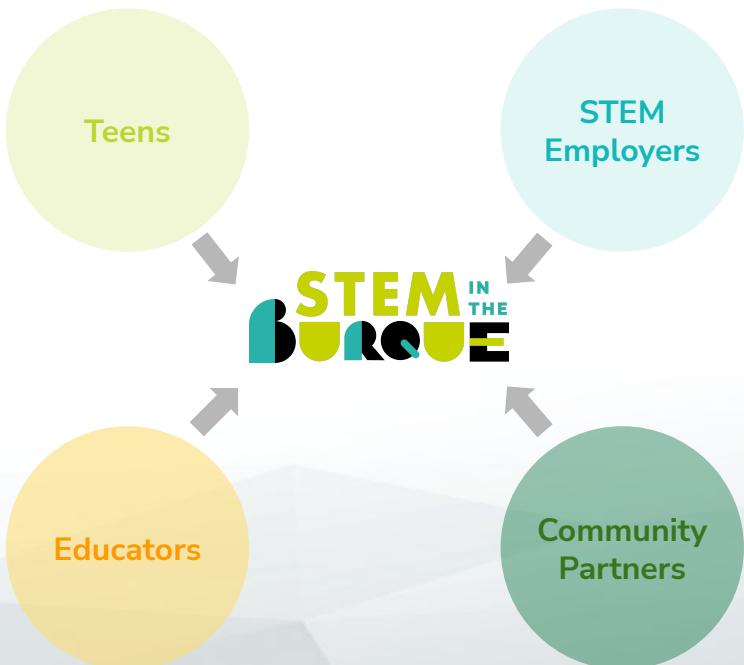
What is *STEM in the Burque?*

- An immersive exhibition highlighting STEM activities in Albuquerque, co-created by Explora, local teens, and ABCWUA and other STEM employers
- Aims to: 1) increase awareness of the STEM research and practices taking place in Albuquerque; 2) empower youth to solve tomorrow's problems through STEM; and 3) develop local teens into future STEM leaders
- Features 14 brand-new, hands-on exhibits, including **7 based on water resource management themes**, along with STEM professional spotlights, a makerspace, tech lab, mentor corners, multipurpose classrooms, a teen lounge, and various programs, all housed in Explora's new teen center, X Studio



How Did *STEM in the Burque* Develop?

- Listening to the community:
 - 25+ community conversations
 - 6 listening sessions with teens, STEM employers, and local educators
 - 12 “empathy interviews” with teens
- Active participation by teens, STEM employers and professionals, and educators throughout design, prototyping, and fabrication.
 - Frequent feedback sessions with teens and educators
 - Regular meetings with community partners and subject-matter experts
- Continuous effort to gain and maintain buy-in from teens, employers, and staff
- Utilization of external exhibit developers to support in-house team and an external evaluator



How Did Water Exhibits Develop?

Kick-off Meeting in Jul 2019
Design Charrettes in Nov & Dec 2019

Three Themes

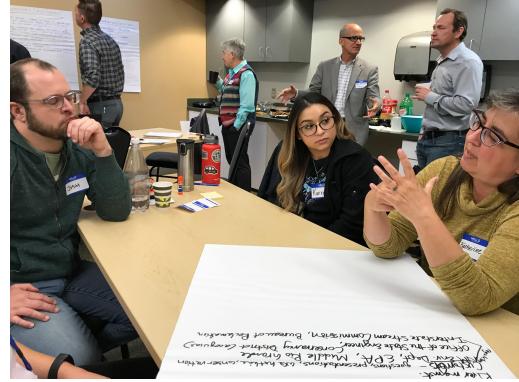
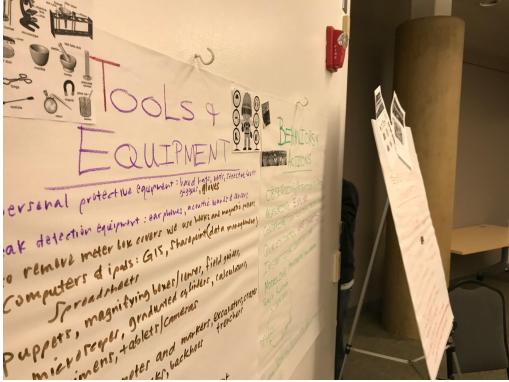
1. Water resources and distribution
2. Water treatment
3. Conservation and stewardship

Seven Focus Areas

1. Aquifer Storage and Recovery (ASR)
2. Reuse
3. Watershed protection
4. Water storage
5. Groundwater and surface water protection
6. Water treatment and distribution
7. Wastewater collection and treatment

Key Narrative

Everyone has a role to play in the work of ABCWUA, and NM's water treatment and resource management - "What's yours?"



Water 2120 Game *Designed by Electric Playhouse*

Water Resource Managers Unite!

Problem-solve real world scenarios and experience the world of water resource management in this interactive game.

Based on **Water 2120**, the Water Authority's 100-year water plan, the game challenges you to optimize the use of existing water supplies rather than seeking new sources, and create your own sustainable 100-year plan while learning about conservation, our water supply, and the career pathways available.



Water Resource Distribution

Do you like a challenge? Try a 150-mile real-world engineering puzzle!

Practice your problem-solving skills by balancing all the parts of this sample system to predict and provide the daily water supply for Albuquerque.

Imagine you are a team member at the Water Authority. Your job is to figure out how much water will be needed on a daily basis from sources including the Rio Grande and groundwater.



Water Bar Treatment/Filtration/Biodegradation

Clean and safe drinking water is important for our health and wellbeing.

See how the Water Authority transform ground water, river water, and sewage water into drinking water.



Water Conservation

Do you like water? We do too!

There's a lot you can do today to launch a career in water conservation. Your personal choices have positive ripple effects! See how your everyday decisions can make a difference in reducing and reusing water.



Aquifer

Did you know you are standing on top of a little known but totally essential part of our lives, which we all need to protect?

Meet the Rio Grande Aquifer system. Spanning 70,000 square miles underground along the Rio Grande Valley, it collects and protects a portion of our drinking water for us.



Refugium

What do you call a microenvironment designed to be the perfect home for an endangered species? A refugium!

In Los Lunas, NM, scientists from the Office of the State Engineer, Interstate Stream Commission are maintaining a refugium for the Rio Grande Silvery Minnow, one of the most endangered fish species in the country. See how a refugium works.



ABCWUA Staff Showcase



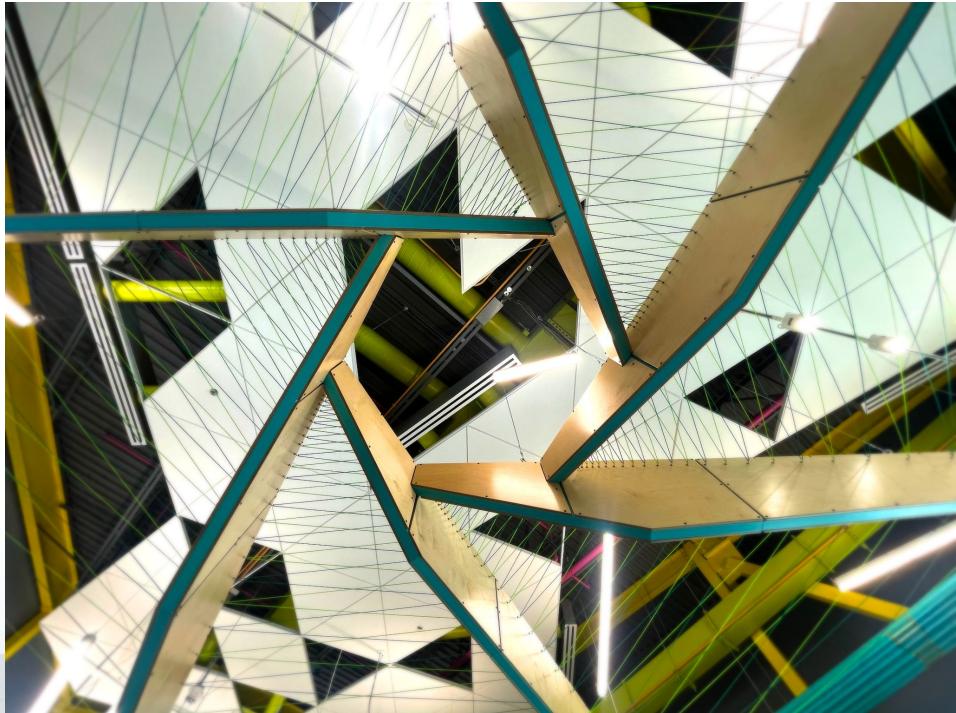
What's Next?

Exhibit Upkeep & Improvements - 5 years

- Initial evaluation by staff and teens within first two months of opening
- Periodic evaluations
- Equipment and software upgrades

Programming Ideas

- “Meet a STEM professional” - Weekend family programs with staff from ABCWUA
- Staff-led water system simulations
- Field trips to the water treatment plant
- Weekend family classes on water conservation at home
- One-on-one career mentorship with ABCWUA staff
- Externship opportunities for Explora's Career Pathways interns



Questions?