



Guerilla Science: a STEAM-approach towards science outreach that engages culturally interested audiences who might not ordinarily engage in STEM

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What we did :

- We conducted two studies: one at the Oregon Eclipse Festival, a large multi-day residential music and arts festival, and one during the Figment festival, a cultural and family-oriented free festival on Governor’s Island (New York City).
- We used a multi-method research design: trained data collectors conducted intercept interviews of various length; short written feedback forms were made available post events; we conducted structured observations of events.
- We compared Guerilla Science audiences with general visitors to the festivals on a range of characteristics, including their appreciation for, interest in, and prior engagement with science, and their satisfaction with the design of Guerilla Science events.

Why we did it :

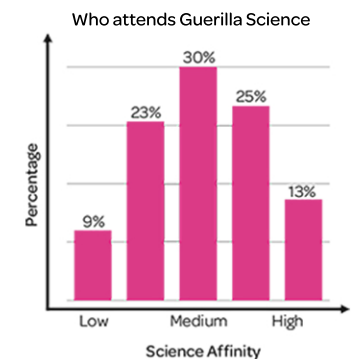
- Self-selection represents a major challenge in informal science learning (ISL). Guerilla Science is a “stealth” approach towards serving audiences who may not ordinarily engage with science; it blends elements of access, by removing barriers to participation through embedding science into unexpected places (such as music or arts festivals) with those of inclusion, by designing activities that speak to the (learning) identities of participants.
- While Guerilla Science targets adults who do not necessarily see science as being “for them,” the question still remained: Does Guerrilla Science cherry-pick a self-selected science audience from those who attend the places and spaces where it is featured?

What we learned :

- Visitors to the Guerilla Science events straddled a broad spectrum of festival goers, from those with little connection and interest in science to science enthusiasts.
- Their profiles matched those of the festival goers overall, indicating that there was no self-selection effect from visitors who attended the festivals.
- Audience feedback supported the notion that the event designs were essential for participant engagement.
- Providing access points to science engagement within non-science cultural contexts and designing the science experiences to align with cultural identity of the audience represents an evidence-based practice for broadening participation.

Reflection prompt :

- Why do you think it’s important to reach new audiences, and how do you do it your work?
- Could the Guerilla Science-style approach of blending access with inclusion help in your work?



1. Rosin, M., Wong, J., O’Connell, K., Storksdieck, M., & Keys, B. (2021). Guerilla Science: Mixing science with art, music and play in unusual settings. *Leonardo*, 54(2), 191-195.
 2. Bisbee O’Connell, K., Keys, B., Storksdieck, M., & Rosin, M. (2020). Context Matters: Using art-based science experiences to broaden participation beyond the choir. *International Journal of Science Education*, Part B, 10(2), 166-185. Chicago



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