

# K-12 STEM Education with the Giant Magellan

Presented by

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# Sources of Early Interest in STEM

- Out-of-school time science activities can strongly influence students' interest in science and help them maintain science interest in more formal school settings (Aschbacher et al., 2010; Chang et al., 2009; Johnson, 2011).
- In a study involving Physics and Chemistry PhD's 68% reported gaining an interest in science before reaching middle school (Maltese & Tai, 2019).



# Our Programs to Support Early Interest

- LabMovil Con Ciencias Astronomia
- Planetario Movil Program
- Universo Expansivo Program
- Extrasolar Art Contest
- *Upcoming: Exploratorium*



# The Power of Partnership

- Partnership with community-based organizations and subject matter experts
  - In 2023, we worked with 15+ partner institutions
- Centering community voice and input in co-creating future programs



# Lab Movil Con Ciencia Astronomia

- Mobile Lab + Planetarium traveling throughout Chile visiting schools and public events
- Design and implementation in collaboration with LCO and Fundacion Ecoscience
- Vehicle design for reaching underserved communities in the country



# Lab Movil Con Ciencia Astronomia



# Universo Expansivo Program

- Tactile earth and space science educational kits for informal and formal K-5 education in Chile and California
- Accompanying lesson plans for teachers in Chile
- Leverages community partnerships and network effects



# Extrasolar Art Contest

- First Art Astronomy Program in Chile
- Designed in collaboration with Antenna Foundation
- Over 200+ Chilean artist submissions and 12,000+ individuals participated





# Featured Upcoming Program

- Phenomenon Based Exhibit Development
- Designed in collaboration with the Exploratorium
- Leverage digital, immersive, and interactive technology to design inspiring and engaging astronomy exhibits



# Key Takeaways

- Importance of building community partnerships and relationships
- Mobility and flexibility when designing informal learning experiences
- Immersive and sensory experiences, particularly for education and outreach for facilities students may not be able to physically visit.

