

EARLY LESSONS LEARNED FROM EVALUATING WORKSHOPS FOR PLANETARY SCIENTISTS AND INFORMAL EDUCATORS IN ENGAGING DIVERSE AUDIENCES. S. Shebby¹, J. Joyce¹, A. J. Shaner², S. Buxner³, ¹McREL International (sshebb@mcrel.org), ²Lunar and Planetary Institute, USRA (shaner@lpi.usra.edu), ³Planetary Science Institute (buxner@psi.edu).

Introduction: The Planetary Resources and Content Heroes (ReaCH) team is working to enhance the planetary science community’s ability to engage with Black and Latinx school-aged youth and their families (Fig. 1). Planetary ReaCH is one of 29 projects funded through the Science Mission Directorate’s Science Activation program.



Fig. 1. The ReaCH logo reflects the team’s desire to help planetary scientists more effectively engage diverse audiences, particularly Black and Latinx communities, in planetary science and exploration.

Over five project years, the Planetary ReaCH team will develop a model for training planetary scientists and informal educators to better engage Black and Latinx school-aged youth and their families based on principles of inclusion, diversity, equity, and accessibility (IDEA). Evaluation will contribute to the development and improvement of project activities throughout the project lifecycle. In the initial years, the formative evaluation will inform the design of project activities and the elements of the model. Later, the summative evaluation will examine the extent to which Planetary ReaCH achieved its intended outcomes.

Assessing Needs: To learn more about perceived needs and interest in professional learning activities, the Planetary ReaCH team surveyed informal educators and collaborated with other Science Activation grantees to survey planetary scientists. More than half of the 100 planetary scientists who responded to the online needs assessment indicated that they would like to engage in more outreach. Over 90% of the 95 informal education respondents reported an interest in planetary science from the audiences they served.

Across both surveys, learning more about engaging underserved audiences and learning about activities to use with audiences emerged as priorities. Additionally, planetary scientists reported an interest in learning effective pedagogical approaches and informal educators expressed an interest in deepening their science content knowledge and understanding (Fig. 2). These themes will be prioritized in workshops. Additional themes from the needs assessments will be presented.

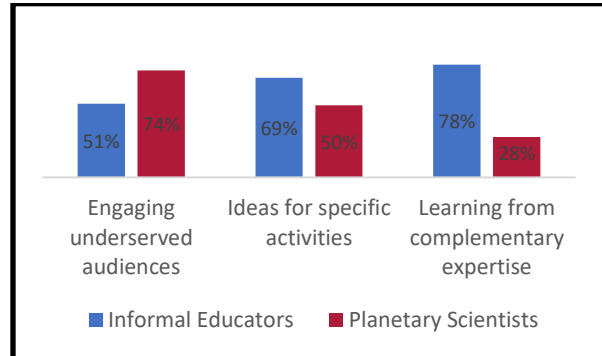


Fig. 2. Select responses from needs assessments displaying complementary themes in response to question about perceived needs and interests from planetary scientist and informal educator respondents.

Early Workshop Evaluation Design: In February 2022, the Planetary ReaCH team hosted a “co-design meeting” to co-identify approaches and activities for the pilot workshops. Three informal educators and four planetary scientists attended and were invited to help shape the design of future activities. The evaluation focused on incorporation of IDEA principles and the co-design approach.

IDEA Principles: The Planetary ReaCH team adopted existing definitions of inclusion, diversity, equity, and accessibility. To help build a shared understanding of how to operationalize these definitions in practice, an evaluator attended the co-design meeting and used an observation protocol to categorize observation data by the predominant themes in adopted definitions (Fig. 3). Themes from observation data will be presented.

Diversity refers to the wide range of differences among people and their perspectives (d5coalition). It includes all the ways people are similar and different at the individual and group levels. Organizational diversity requires examining and questioning the makeup of a group to ensure that multiple perspectives are represented.

	Individual level	Group level	Organizational
Facilitator behaviors /quotes			
Participant behaviors /quotes			
Setting			

Fig 3. *Sample “diversity” observation protocol. The Planetary ReaCH definition of diversity was adopted from the d5coalition.*

The Co-design Approach: The evaluation also included a post-session survey and focus group. Both were designed to provide the Planetary ReaCH team with early evidence about whether their approach was on track to meet the project goals. More detailed findings from these data collections will be discussed.

More data will be collected to inform the ReaCH model during upcoming pilot workshops across the United States. The first pilot will take place in April 2022. Results of evaluation data from this pilot will be presented. Further refinements to the Planetary ReaCH model will be informed by evaluation data from three pilot workshops scheduled for 2022.

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Additional Information: If you have any questions or would like additional information regarding the Planetary ReaCH evaluation, please contact Susan Shebby at sshebby@mcrel.org or visit www.lpi.usra.edu/planetary-reach.