Space Hazards Beta Test Report

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Introduction

PLANETS is a national out-of-school time (OST) curriculum for educators of youth in grades 3-8 that provides STEM learning with an emphasis on integrating NASA planetary science and engineering, particularly for underserved audiences. There are three PLANETS units: Remote Sensing, Water in Extreme Environments, and Space Hazards. Remote Sensing and Water in Extreme Environments are designed for learners in grades 6-8; and Space Hazards for learners in grades 3-5. Each unit consists of engineering and science activities, educator resources, family resources, and supplemental resources.

In 2021, NASA funded PLANETS to optimize all three units to include more NASA assets and intentional strategies for diversity, equity, inclusion, accessibility, and belonging for three intended audiences: Indigenous learners, multilingual learners, and learners experiencing diverse physical abilities. After PLANETS co-design teams complete optimization of each unit, the unit is beta tested nationally. Beta test results are being used by PLANETS co-design teams to finalize unit optimizations. PLANETS co-design teams consist of a representative from one of PLANETS key partners (Northern ArizonaUniversity, USGS Astrogeology Science Center, Museum of Science Boston, & WestEd) and one of our co-design consultants or experts representing our intended audiences.

This report summarizes the PLANETS Space Hazards Beta Test for out of school time (OST) educators in the Spring and Summer of 2024. Space Hazards engages learners in grades 3-5 to develop a plan to mitigate hazards on a NASA mission and engineer space gloves to protect astronauts from cold, impact, and dust. Findings from the beta test provide critical insights on how OST educators planned and prepared to teach the unit, implementation feedback on learner engagement, specific suggestions for activity improvement, and overall perceptions on the effectiveness of the unit for intended learner audiences.

General Findings for the Space Hazards Beta Test

- Both OST educators and their learners responded positively to the unit.
- The hands-on activities motivated learners and sparked their interest in STEM and NASA.
- Learners expressed excitement about the unit even when the activities were a bit challenging.
- There was less learner engagement with Space Hazards science card activities.
- Learners enjoyed working together and solving problems with their peers.
- Learners were able to make meaningful connections between science and engineering concepts, especially in how STEM can be applied to their daily lives.
- Some learners expressed interest in a future STEM career, working for NASA, or continuing to learn more STEM. .

- The type of OST setting (afterschool or summer camp) OR the type of educator (afterschool classroom teacher or instructor at a Boys and Girls Club) may make a difference in how the curriculum is implemented.

Beta Test Methods

Overview

The beta test study involves (a) specific questions from PLANETS co-design team for optimizations of the unit, (b) refinement of feedback survey protocols, activity-by-activity surveys, unit summary surveys, and focus group questions, (c) national recruitment and selection process for afterschool and summer camp OST educators working with PLANETS three intended audiences, (d) an orientation webinar for selected OST educators, (e) weekly check-ins with beta test educators, (f) focus group interviews with beta test educators upon completion of teaching the unit, (g) data analysis, and (h) communication with co-design teams to iterate changes to the unit.

Recruitment and selection process

OST educators were recruited through electronic flyers detailing the requirements and benefits of participating in the beta test. The flyers were distributed through key partner contacts starting in January 2024. Flyers were also distributed at two conferences in February where PLANETS was exhibiting: Space Exploration Educators Conference (Houston, TX) and Beyond School Hours (New Orleans, LA). Applications were due February 20th, 2024.

A total of 166 applications were received for the PLANETS Space Hazards Beta Test. Applications were filtered for completeness and duplications (n = 40 were removed). An additional nine sites were filtered out for being international locations. For the remaining 126 applications, the review followed an iterative process filtering OST sites' representation of PLANETS' three intended audiences, implementation time frame (after school or summer), and geographic distribution across the United States. A total of 13 educators were accepted to be beta testers: five educators were chosen for the afterschool beta testing and eight educators were chosen for the summer beta testing. Participants were notified of their acceptance by March 2024. Each educator was scheduled for a virtual training session and sent materials kits to implement the Space Hazards Unit. Three of the 13 beta testers dropped out due to unforeseen circumstances. The continuing ten OST educators implemented both science and engineering components of the unit. The ten educators were spread across seven sites in five locations: Arizona, Texas, Washington, District of Columbia, and Puerto Rico. (Appendix – A).

Participating educators were asked to implement both units during the spring or summer of 2024. The PLANETS Space Hazard Adventures (activities) are listed below.

Engineering, In Good Hands: Engineering Space Gloves

Ready, S.E.T. (Science, Engineering, Technology), Go!
Engineering Adventure 1: Everyday Gloves
Engineering Adventure 2: Chilling Out
Engineering Adventure 3: Ready for Impact
Engineering Adventure 4: Dangerous Dust
Engineering Adventure 5: Create a Space Glove
Engineering Adventure 6: Improve a Space Glove
Engineering Adventure 7: Engineering Share-Out

Science, Space Hazards, Planetary Science Adventures for Out of School Time

Ready, S.E.T. (Science, Engineering, Technology), Go!
Science Adventure 1: Everyday Hazards
Science Adventure 2: Hazards Where We Live
Science Adventure 3: Earth Hazards
Science Adventure 4: Hazards in Space
Science Adventure 5: Mitigate Hazards for Your Mission
Science Adventure 6: Science Share-Out

Data Collection

Mixed methods of daily quantitative and qualitative electronic surveys along with focus group interviews were utilized to collect data from educators (Appendix B). The Space Hazards science component had one activity survey for each of the seven activities and one summative survey. The Space Hazards engineering component had one activity survey for each of the eight activities and one summative survey. Of the ten beta test educators, nine completed surveys for the seven beta sites. Across all activities, the total survey responses were 135. Educators were asked to provide feedback on a Likert Scale of their perceptions of activity implementation and of how learners from the intended populations interacted with the optimized activities. Open ended questions allowed for qualitative comments. Six focus groups (Appendix – B) provided additional qualitative feedback about how the beta test educators used the educator resources in the unit and how they prepared and implemented selected activities.

Data Analysis

There were a total of 135 total survey responses, which were used to calculate the percentages reported. Data analysis from beta test surveys and focus groups were conducted in five phases:

1. When surveys were completed, participant responses were gathered and summarized. Actionable items were communicated to co-design team leads for edit considerations.
2. Quantitative survey data were placed into an Excel pivot table searchable by science or engineering components, audiences, etc.

3. The focus group qualitative data were summarized into a report with suggested actions. This too was provided to the co-design team leads for edit considerations.
4. During the annual PLANETS Partner Working Group (PWG), the PLANETS team members participated in a data driven dialogue[1]. The data driven dialogue provided an opportunity for the PWG members to explore the beta test data. Although group analysis of the data was brief, this exercise provided vital collective understanding of the perceptions of OST educators on the unit so that shared decisions on optimizations could be developed.
5. A beta test report was prepared to document the process and summarize the key learnings.

Beta Test Educator Demographics (N=10)

The ten participating OST beta test educators were asked about their race and ethnic identity, formal education, and if they experienced one or more diverse physical abilities (Figure 1). For these questions, educators were able to "mark all that apply" for their responses. Sixty percent of the educators identified as Hispanic, Latino/a, or Chicano/a, 30% identified as White or Caucasian, 10% identified as Black or African American, and 10% identified as Asian. As for formal education, 70% had a bachelor's or higher degree. Thirty percent of the educators experienced low or no vision, 20% experienced low or no hearing, and 10% experienced reduced manual dexterity. Seventy percent of the educators identified as female, with 30% identifying as male.

Identity

Asian	10%
Black or African American	10%
Hispanic or Latino/a/e	60%
White or Caucasian	30%

Formal Education

20%	Teacher certification - elementary
10%	Teacher certification - secondary
40%	Bachelor's degree
20%	Master's degree
10%	Doctoral student
10%	No response
10%	Conditional Teaching License
30%	Not applicable

Diverse Physical Abilities

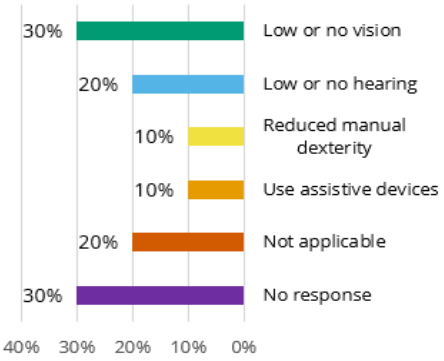

Figure 1: Beta Test Educator Demographics

Beta Test Educator Experience (N=10)

Two questions that contribute to the interpretation of beta test data and subsequently to changes in the PLANETS curricula are the levels of experience an OST educator has and how much professional development opportunities an OST educator is provided (Figure 2). A majority of educators (60%)

[1]*Love, N. (2000). Using data-getting results: Collaborative inquiry for school based mathematics and science reform. Columbia, MA: The Regional TERC Alliance for Mathematics and Science Education Reform.*

were fairly new and had been teaching in OST settings between one to five years. In terms of hours of professional development or training per year, a majority (80%) said they had more than 21 hours of professional development. This opens possibilities for PLANETS to provide customized professional development for OST educators.

Years working in OST settings

Years	Percent
<1	0%
1-5	60%
6-10	10%
11-20	20%
20+	10%

Figure 2: Beta Test Educator Experience

OST Site Information

Of the ten educators, 70% served learners in an urban area, 10% served learners in suburban areas, and 20% served learners in all three locales (rural, urban, and suburban). All learners qualified for free and reduced lunch. A majority of the OST sites (70%) were nonprofit or community-based programs. Thirty percent were after school programs, either for public or charter schools. Sites were located in five areas across the US (Arizona, Texas, Washington, Washington DC, and Puerto Rico) (see Appendix - A).

Beta Test Learner Demographics (N=259)

Beta test educators were asked to provide information about their learner demographics. A total of 259 learners participated in the beta test, 53% of the learners identified as male, 46% as female, and 1% or less as non-binary or unknown. A majority of the learners were multilingual (47%), 23% of learners were Indigenous (American Indian, Alaska Native, Native Hawaiian or Other Pacific Islander), and 20% identified as having a diverse physical ability. Of the 20% who identified as having one or more diverse physical abilities, 7% experienced reduced manual dexterity, 6% experienced low or no hearing, and 8% experienced low or no vision. Note: percentages were rounded to the nearest whole number (figure 4).

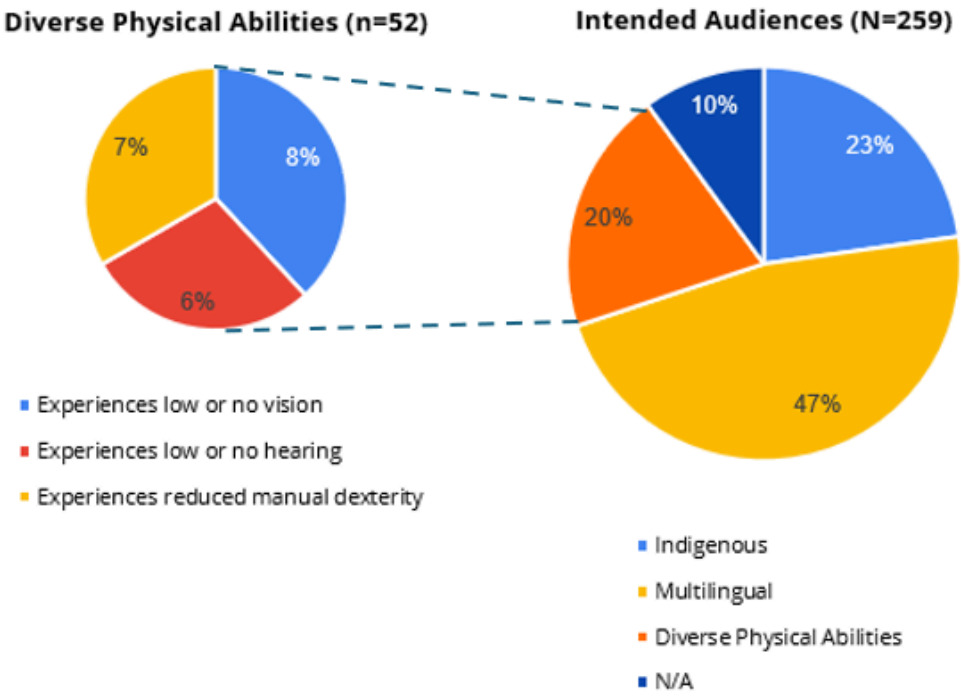

Figure 4: Beta Test Learner Intended Audiences

Beta Test Findings and Lessons Learned

Planning, preparation, and resource supports

Beta educators were provided with all materials and asked to review the needed materials to implement the Space Hazards unit including the PLANETS Beta website, science and engineering educator guides, an OST practical guide, and all learner materials (printed and tangible kit materials). The educator guides provide additional resources to support implementation such as pedagogical strategies, guiding questions, and tips for working with diverse audiences. Learners were provided with notebooks to help them keep track of the activities. Learner notebooks include illustrations, charts, and tables. All printable materials were provided both electronically and in print. Where appropriate, QR codes were provided to allow educators to access material electronically on the PLANETS Beta website.

A synthesis of these findings and the focus groups follow:

Preparation Time

- In the educator background survey that educators took prior to implementing PLANETS, 40% of educators indicated they typically spend anywhere between one hour to five hours to prep their materials for their OST program activities; 50% said they spent six to ten hours; and 10% said they spent eleven or more hours to prepare their materials. After

implementing the PLANETS curriculum, educators were asked about how much time they specifically spent in planning and preparing to teach the PLANETS curriculum. They reserved an average of 2-3 hours for preparation time. This finding is important because it shows that the educator supports built into the PLANETS curriculum helped to streamline planning and preparation for educators.

Educator Supports

- Educators felt that the materials provided provided enough support to implement the unit. A majority of responses (96%) agreed that the PLANETS website was accessible and usable. As one Beta educator expressed, printed materials in an OST setting was *"extremely helpful when it came time to practice, prep, and setup. It was good to be able to write my own notes in the book while I was prepping."*

Educator Resource Guide

- Ninety-eight percent of responses agreed that the pedagogical resources (educator guide intro, tips, videos, grouping and inclusion strategies) supported their ability to implement the activities. One educator stated, *"The resources help me obtain a better skills base to teach the curriculum to my students."* At the beginning of each activity, guiding questions for the learners were provided, and educators stated these questions helped keep learners focused and provided educators an opportunity to expand upon. Focus group responses identified that the guiding questions were effective in determining prior knowledge and in supporting growth and understanding throughout the curriculum.

Learner Resources

- Ninety-eight percent agreed that the learner resources (e.g., science notebooks, context setting comics) supported understanding of the activities. Focus group responses revealed that the learner resources were helpful in reducing writing demands. Specific features, such as charts and tables allowed learners to record data and interact immediately by processing data. Educators reported that learners were able to grasp the content and follow the progression of the activities. Other items that learners found helpful were illustrations, which were clear and large. These reduced language barriers, allowing multilingual learners to understand content, and limited the time needed for translating. Overall, the resources helped learners interact and stay engaged.

Activity Instructions

- Feedback from the focus group suggested that clearer instructions are needed to implement the activities. For example, educators found the materials in the kits to be messy, incomplete, or out of order. Occasionally, an educator noted they were confused by how the materials are used in setting up activities. Educators suggested more visual ways of demonstrating how to implement the activities and other specific recommendations to make an activity's instructions clearer.

OST Setting/Educator Differences

- In OST settings, planning and implementing a STEM curriculum can be difficult due to the timing, shorter attention spans of learners, number of learners, and the need for preparation. A few educators mused that implementing PLANETS as an after-school program would seem easier than implementing during the summer. For example, at the Houston site where there were three educators, they said that if they were to teach this unit during a summer camp, they would have little time to collaborate, prepare, and check in with learners during the summer. The type of educator (after school classroom teacher or instructor at a Boys and Girls Club) may also make a difference in how the curriculum is implemented. Educators felt supported by the educator resources in their OST setting (after school or summer camp). Educators noted that in some summer camp settings, they have less time with learners. In these situations, educators might opt out of inclusive strategies that were built into the curriculum, such as the 'Our Ideas' poster.

Implementation

Educators were asked to teach the activities to their learners using the materials and curriculum provided as written, and then provide feedback about implementation in survey responses. Educators were asked to follow the curriculum with fidelity; and if changes to the activities were made, they were asked to explain changes in the survey responses.

Learner Engagement

- The majority of educators had positive feedback to share about the curriculum for engaging all learners. Educators described the curriculum as fun, engaging, and said that learners really enjoyed the activities. For example, one educator shared, *"The learners are enjoying all of the hands-on activities. It allows them to have fun and to be creative while learning."* Educators reinforced the importance of incorporating visual and tactile, hands-on activities. A few educators mentioned that the hands-on activities promoted engagement with the learners. For example, one educator commented on the engineering unit, *"Students enjoyed taking responsibility for testing their own material individually or in a small group. Without their test results, the testing chart would be incomplete and that would affect the outcome of the lessons for all students, not just themselves."* In addition to providing hands-on activities, encouraging creativity and choice when designing technology to address engineering problems kept the learners engaged. Educators also shared that when learners were encouraged to recollect and share prior knowledge from an asset-based mindset, meaning their life experiences and prior knowledge are assets, they were more likely to be engaged in the activities.
- The majority of educators, 97%, indicated that learners were engaged in the activities. One science activity, Space Hazards card game, was not as engaging and learners became bored. A possible reason was that the card game instructions were confusing for the learners. Some educators mentioned that their learners' lost focus when cards were used repeatedly.
- Many educators reported that their learners felt more connected to STEM. They also made connections to real life hazards. For example, one educator said, *"Students now get to*

understand all of the processes that go on behind the scenes when scientists and engineers are creating objects to go into space...they assumed that whatever result they got, they were done. Until they were encouraged to continue to work through their failure." Rather than seeing a hazard as a deterrent, learners were willing to collaborate on a proposed technology to address the hazards with which they were faced. They appeared to understand the perseverance of scientists and engineers to test and retest materials.

Indigenous Learners

- Three educators worked with Indigenous learners in their OST setting. All agreed that the activities met the needs of their learners. In surveys and the focus group, one of the educators expressed the value of incorporating storytelling for Indigenous learners, especially when discussing local hazards and protective measures. Indigenous learners also benefited from the strategies intended for multilingual learners. For example, language barriers were reduced when learners were provided multiple means of accessing language (Our Ideas Poster) and opportunities to design a solution to an engineering problem. As one educator commented, *"The learners were free to share a story, make personal connections, how the engineering process went, and why they designed the glove to have a successful mission."*

Multilingual Learners

- Nine of the educators had multilingual learners in their OST setting. Ninety percent of responses agreed that the activities met the needs of these learners.
- Beta educators found visual design aspects to be helpful, especially when paired with vocabulary. For example, one educator said, *"The [multilingual learners] worked in partners to translate the Procedures but having the illustrations there was very helpful for them to understand what was being asked of them."* A few educators reported that a major asset for learners was group or partner interaction, especially when multilingual learners were paired with bilingual learners. Providing learners with multiple means of accessing language (Our Ideas Poster) was also a supportive strategy for multilingual learners.
- Educators suggested that to make the curriculum more inclusive, materials could be translated into other languages, such as Spanish. Educators noted that it is difficult for multilingual learners to understand the scientific terminology. One educator suggested providing content in different formats, or resources, where students can hear the content in their native language.
- As previously mentioned, learners were engaged by the hands-on tactile activities. Having the ability to experiment, and observe cause and effect, helped multilingual learners to feel supported and more comfortable in participation, as "*language isn't needed as the forefront for the success of the Adventure."*

Learners with Diverse Physical Abilities

- Four educators had learners with diverse physical abilities and overall they agreed that the activities met their learners' needs. However, one educator indicated that three of the

science activities did not meet the needs of their learners and suggested changes for improvement. The feedback provided by this educator was to include more images or videos that reflect the learners with diverse physical abilities.

- Educators identified that learners with diverse physical abilities benefited from strategic grouping where teamwork was strongly encouraged and structured in the curriculum. Educators observed a supporting level of empathy and peer-to-peer support, allowing learners with different abilities to support each other.
- Using familiar materials consecutively throughout activities provided learners with continuity and support. Learners became familiar with concepts and able to apply prior knowledge as the activities progressed.
- The engineering design process played a role in the success of how well learners with diverse physical abilities coped with failure. An educator mentioned, *"The repetitive nature of the improvement process allowed for multiple attempts, which could benefit learners who need more time or different approaches."*
- One educator suggested that more visual and dynamic materials could be added to the curriculum for learners with hearing limitations. One educator from the engineering unit highlighted the importance of versatile materials. *"The materials are everything...I like how the kids are seeing familiar things. It allows them to really see how everything is tied in and the materials used really demonstrate real life scenarios."*
- An educator from the focus group mentioned that some of the terminology was difficult to interpret/translate into sign language. This was similar to another comment from an educator who suggested having more examples in the curriculum that cater to learners with diverse physical abilities would help facilitators.

Overall Learner Inclusion and Understanding

One common thread that benefitted all learners and supported engagement in each activity was opportunities for collaboration, or teamwork, with peers. Another was that earners were able to engage in the task, especially those including characters in the comics. Educators appreciated the overall inclusive learning environment that included learners' own language, incorporated drawing as a means of expression, and provided large, colorful visuals.

Educator Resources

- The educator resources provided a clear sense of where the activities were leading and helped prepare educators for what to expect. A majority of educators found the resources helpful to guide their instruction and often enhanced the lesson plans.
- Not all educators used all the resources available in the written curriculum and on the PLANETS website. For those that utilized multiple resources, they felt supported in teaching STEM. One educator without a science background stated, *"I thought that the 'Support/ing Learner Differences', 'Level Up!', narrative prompts, and reflection questions were helpful for an OST educator whose background may not specialize in STEM or science."*

- Educator guides are phrased in scripted and narrative prompts for educators. Educators mentioned the narrative prompts provided a level of confidence when teaching the curriculum.
- The Level Up activities helped emphasize the connection to NASA science and supported the purpose of why learners were participating in the engineering and science activities each day. Fifty-seven percent of the educators said they used the Level Up activities. The feedback from these educators was mostly positive. They saw these tips as opportunities to dig deeper in the activity content. For example, one educator stated, *"[The Level Ups] showed the learners what they were doing goes way beyond the classroom walls and really does have implications or utilizations in the world."* A second educator said, *"My students utilized the 'IMPROVING SUIT FOR EXPLORING A PLANET' video. My 3rd graders love a visual representation. It helps them better understand why we're doing certain activities and understanding why certain suits are created a certain way."*

OST Educators' Instruction

- Educators were asked to rate their interest in science and engineering based on the PLANETS curriculum. All the educators who implemented the engineering unit agreed that the PLANETS curriculum increased their interest in science and engineering. For science, 90% of educators agreed that the curriculum increased their interest in science and engineering. Educators also felt the curriculum enhanced their capacity to support diverse learners.
- Of the few negative curricular reviews, one educator elaborated that the guide was not as educative for them as hoped and had other critiques: *"This curriculum did not engage our students as much as I had hoped for. The pathways seemed unnecessarily complicated, even though the overall goal was simple. This curriculum did not provide me with much additional information that I did not know about outer space and the hazards faced there. I felt the curriculum was very focused on Earth, even though the ultimate goal of the science and engineering pathways is to consider everyday life in space."*
- Educators identified how teaching the curriculum supported their instruction and interest in STEM, *"I discovered more ways to assess the campers' understanding and to pay attention to how the learning situation impacted their engagement."* Another educator added, "*I have never been one to be very good in science and as a result, have not had a huge interest in STEM topics. But after teaching this curriculum and being able to show real-life examples of what NASA has been doing has definitely piqued my interest and I would love to see more videos of behind-the-scenes at NASA."*

Learner Inclusivity

- A majority of the educators (89%) felt that the unit was inclusive of all learners. The engineering component had more positive feedback as all educators agreed that learners engaged with content. Learners expressed their understanding of activities and connected their learning to situations in their everyday lives or cultures. For the science component,

67% agreed that the learners engaged with the content, 67% agreed that learners expressed understanding of the activities, and 89% agreed that learners connect their learning to their everyday lives or cultures.

- When asked if the curriculum enhanced their capacity to support diverse learners, 78% of responses agreed.
- Qualitative feedback from the educators highlighted that the curriculum represented multiple races, genders, identities, and diverse physical abilities. An educator stated, *"I felt like they could relate to it. It was a male and a female. They weren't just a blonde haired, blue eyed white person. They had different backgrounds and ethnicities. So I felt like the students saw what I would think of 20 years ago what a scientist looks like. They saw themselves as that comic book kid that could be part of the adventure. So I felt that was definitely something to utilize."*
- Educators referenced the several curriculum tools that included imagery from the videos, slides, and comics that engaged their learners and supported them feeling included. Educators provided examples such as visual cues that helped learners identify hazards and mitigations in the activities. Other examples provided by educators were visual instructions that helped learners with various language abilities understand the content.
- Other educators mentioned the numerous ways that learners can express their ideas.
- Educators mentioned frequently that the collaboration aspect of the curriculum made it possible for learners to include everyone in the activities.

Overall Summary

Educators expressed positive experiences with both science and engineering components of the Space Hazards unit. One of the educators using the engineering component said, *"This unit was very engaging for our students. After sitting in a classroom all day, being able to come to an OST program and physically interact with materials and use their creativity did not feel like learning and/or school to the kids."* In some cases, educators reported that their teaching practices had been altered to better suit the needs of their learners. For example, *"I think having all of these skills and the support learning section really opened my eyes as to how I can help diverse learners and perhaps students who may not have a disability but may understand content differently."* Both the survey and focus group data revealed that educators felt less confident teaching STEM topics ***prior*** to the Space Hazards unit and afterwards, they felt supported to teach STEM topics with more confidence.

Educators said that learners made deeper connections with the PLANETS content, both in understanding the perseverance of scientists and engineers to test and retest materials, and more importantly, seeing themselves as scientists and engineers. Educators stated their learners *"are more interested in science and want to continue learning new things related to science and engineering. For example: a student wants to learn how to develop hearing aids and improve them."*

Overall, educators saw growth among their learners and the excitement for STEM topics. They saw collaboration, problem solving skills at the individual and group level, communicating with each

other, and engaging in fun activities. The Space Hazards unit made positive impacts on both learners and the educators.

Appendix - A

Table 1: List of OST Sites

Beta Test Site (name, city, state)	Number of Beta Educators per Site	Beta Learners (total and grade range)	Session	OST Location
Boys & Girls Club of Greater Houston, Houston, Texas	3	18, 22, 14 (3rd-5th grade)	Afterschool	Urban
Homer Davis, Tucson, Arizona	1	61 (3rd- 5th grade)	Afterschool	Suburban
Chinese Community Center, Houston, Texas	1	34 (3rd-7th grade)	Afterschool	Urban
Muckleshoot Youth and Teen Center, Federal Way, Washington	1	49 (3rd - 5th grade)	Summer Camp	Other: All types
Latin American Youth Center, Washington, DC	2	9 (4th - 5th grade)	Summer Camp	Urban
Colegio San Gabriel, San Juan PR & Summer Camp Educadiz, Puerto Rico	1	7 (4th-5th grade) 6 (3rd grade)	Summer Camp	Other: All types
BRYSS Academy, Brownsville, Texas	1	36 (3rd - 7th grade)	Summer Camp	Urban
Baker Ripley, Houston, Texas	1*	*Information was not provided by educator*	Summer Camp	*Missing info*
Dosewell Brooks, Capitol Heights, Maryland	1*	*Information was not provided by educator*	Summer Camp	Urban
Shonto Preparatory School, Shonto, Arizona	1*	*Information was not provided by educator*	Summer Camp	*Missing info*

**OST Educators that dropped out of beta testing.*

Appendix - B

Table 2: OST Sites and Focus Group Sessions

Session	6 Focus Group Sessions (# of educators who attended)
Afterschool	Session 1: Boys & Girls Club of Greater Houston, Houston 3 educators
	Session 2: Both Homer Davis & Chinese Community Center attended same session 2 educators
Summer Camp	Session 1: Muckleshoot Learners and Teen Center 1 educator
	Session 2: Latin American Learners Center 1 educator
	Session 3: Colegio San Gabriel 1 educator, 1 translator
	Session 4: BRYSS Academy 1 educator