

# Adapting to Virtual Programming

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The Native American Science and Engineering Program (NASEP) is a year-long program that offers STEM engagement throughout the academic year. Each group is seen as a cohort and will receive support from NASEP staff as they prepare to apply to college. Additionally, there are other events offered throughout the year that consists of 4 phases: summer session, research project, enrichment, and closing. As COVID-19 put a hold on gatherings, academics, leisure, and other aspects of life, NASEP also had to adjust its normal programming to ensure the safety and wellbeing of



*The 2020 NASEP cohort was held entirely through Zoom*

our participants, staff, and community. This normally non-stop 1-week in-person program that takes place at the University of Arizona campus was switched to a two-week program offered on Zoom. We had twenty-six students login from across Arizona and New Mexico, who represented the Diné, Ho-Chunk, Hopi, Pascua Yaqui, Tohono O’odham and White Mountain Apache tribal nations. Each student was given an iPad to use to ensure that they could access the program virtually. At the end of the two-week program, students stated that they felt more comfortable in applying to college and felt that they learned of more STEM careers and opportunities. Ely Robbins (junior) stated, “I have learned a lot. I have learned more than I ever have about college and scholarships.” Although this was a new experience, we felt that it was successful and are thankful to our partners who provided support by making adjustments to their presentations to make it more interactive for an online platform.

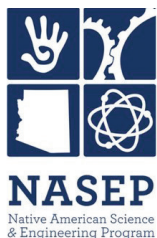
After completing our first online program, our advice for others planning to also change to a virtual format are:

- Interview people who have had experience with an online program: At the time that we were making this change, we reached out to individuals in the MEDSTART program, which had started 5-weeks before our program. We interviewed a participant and a staff person to get two different perspectives on what engaged students most effectively. Shout out to Maya McCormick and Dr. Tiffany Sorrell who shared their experience candidly with us! We learned about a free resource called Kahoot! that can be downloaded to a smart phone which allows participants to play an online quiz game from anywhere. We utilized this resource heavily in our program and our presenters often provide incentives participation with goodies we mailed to our students. In addition, we gained ideas on how to conduct virtual socials like movie nights.
- Watch the Indigenizing Zoom Presentation from the Indigenous Educators Unite series: In this recorded presentation, Dr. Amanda Cheromiah covers twenty different strategies that help educators engage all people in an online space. Our favorites included the ZoomName-Change ice breaker, the use of breakout rooms, and ways to combat Zoom fatigue. It is available to watch on YouTube.

- Utilizing small groups helped students engage with the program content more intimately: Our students were broken up into 3 groups which were led by a staff member. Whenever we had activities, we would break out into these groups which allowed them to discuss topics more intimately. It was also helpful for students who were shy and maybe have been more hesitant to speak to the whole group. We also broke students into “Exit Buddies” which was a socially distanced version of our in-person High-Five Buddies. The buddies, choreographed a dance that they would do every time we said “Find your Exit Buddy” which served the purpose of getting students moving to combat Zoom fatigue. Students were told to check in with their buddy daily which harnessed group accountability. If their buddy was running late to something, the participant knew to ask if they’re okay and to get them caught up.
- Integrating both virtual and off-Zoom spaces for learning can help avoid computer fatigue: Since our program only ran online for part of the day, we assigned off Zoom activities which included listening to podcasts or watching TedTalks and YouTube videos. Our Graduate Assistant, Natalia Cachora, had students create an air quality sensor using tools found in their home which was then used for her Air Quality presentation. The content was aimed at complementing our presentations for the following day and were discussed in our morning check-ins or during a lesson. This encourages learning beyond the screen, which can give students a break from constantly being on Zoom.
- There are a lot of free tools that can be used to create a fun environment for Native high school students to engage with the program: We mentioned Kahoot! above, but there are a lot more great tools that helped us engage with students. Slack is a channel based messaging platform that helps us communicate with families and participants. We use different channels that allow for program related things, but to also facilitate social interactions among the cohort. We found that many students missed participating in school sports. We used the Nike Run Club app to challenge one another to be physically active throughout the program. It was so successful that students asked to continue the challenge past the 2-week period.

As we enter our research project and enrichment phases of NASEP, we look forward to continuing to engage students in a virtual setting and have seen that online conference platforms are making updates to make this experience better for their users. We are thankful to all of our partners for their support in making NASEP a success. We are especially appreciative to the Southwest Environmental Health Science Center (SWESHC) and UArizona College of Pharmacy who continue to support NASEP by printing the research posters that our students use to compete and present in science fairs and conferences, and by presenting each year during our summer program.

To watch the Indigenizing Zoom Presentation go to: <https://www.youtube.com/watch?v=5Q08LQ5NXbQ>



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