Before we are born, we exist in a fluid space punctuated by the seamless connection between math and music. Maternal heartbeat rhythms and vocal timbres are hardwired within us: we emerge from and into sound. Indigenous communities such as the Navajo (Diné) Nation maintain this sonic and spiritual connection through ceremonies, shepherd songs, and children’s games that center on drumbeats and chanting. Yet, although scientific and humanistic studies abound with evidence that links musical study to mathematical success, very few K-12 programs include music as more than an auxiliary sidebar. The marginalization of arts education is most pronounced in disenfranchised communities, especially among indigenous peoples.

During the summer of 2016, violinists Ariel Horowitz and Leerone Hakami facilitated the inaugural Heartbeat Project on the Navajo (Diné) Reservation in New Mexico. The project, hosted by Navajo Technical University and generously funded by a Community Engagement Grant from The Juilliard School, combined music and math education for children living on the reservation, a place of extreme poverty and disenfranchisement. Based on the powerful, emotional, and educational impact of the 2016 project, Ariel and Leerone are deeply honored to have been invited by Dean Wesley K. Thomas of NTU to return to the reservation this summer with an expanded program. Drawing on Navajo (Diné) traditional education systems, traditional tunes and rhythms, and naturally occurring soundscapes in the Navajo Nation, the Heartbeat Project 2017 will include four teaching artists in addition to co-founders Ariel and Leerone geared to serve different classes and levels of ability from varying age groups in a K-12 range. The program will run for ten days, from August 1-11th, 2017 including community concerts, collaboration with Diné musicians, and a final performance showcasing the accomplishments of our beloved students. We hope to provide a safe and nurturing learning environment for our students to harness the skills they learn musically into their math endeavors, increasing their academic success and ultimate career potential.
# ACTIVITIES AND EVENTS

<table>
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<tr>
<th>Date</th>
<th>Goals</th>
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<tr>
<td>July 31</td>
<td>● Arrival of all team members into ABQ airport</td>
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| August 1       | ● Travel to NTU on Navajo Reservation  
                 ● Team meeting  
                 ● Team meeting with Dean Thomas  
                 ● Curriculum prep |
| August 2-11    | ● Morning session (10 am - 12 pm)  
                 ○ Breakdown into four classes by grade: K-2, 3-5, 6-8, 9-12 to be led by individual Teaching Artists to develop musical/mathematics skills  
                 ○ Co-founders assist as necessary and move through the classes  
                 ○ Co-founders meet in the mornings with Dean Thomas and the President of NTU to discuss ongoing partnership  
                 ● Lunch with all participants (12 pm - 1 pm)  
                 ● Break (1 pm - 1:30 pm)  
                 ● Afternoon session (1:30 pm - 3:30 pm)  
                 ○ All participants, led by Co-founders, rehearse for the final performance  
                 ○ Musical presentations by co-founders and teaching artists  
                 ○ Presentations by Dine artists and musicians  
                 ● Evening community concerts 7 pm  
                 ○ Co-founders and Teaching Artists collaborate with Dine Musicians  
                 ● Nightly team meetings |
| Sunday, August 6 | ● Afternoon Trip of all participants to Window Rock, the Capital of Navajo Nation (transportation provided by NTU) |
| August 12      | ● Co-founders and Teaching artists travel home |
THE HEARTBEAT PROJECT TEAM

Co-Founders/Facilitators: Includes Ariel and Leerone. This job includes selecting and overseeing the Teaching Artists and curriculum development, communicating directly with Wesley, fundraising, meeting with officials at NTU to discuss sustainability, leading afternoon full group sessions with all the students and Teaching Artists, and other administrative ventures.

Teaching Artists: Four Teaching Artists, to be selected by the Co-Founders/Facilitators from The Juilliard School. Teaching Artists will provide daily classes for the students. One Teaching Artist will be responsible for each age group, making curricula specifically designed for each age group’s level. Each day, Co-Founders/Facilitators will join a different Teaching Artist’s class to co-facilitate the different classes.

Musical and mathematical expertise will all derive from the knowledge of the Juilliard students, who have had experience with teaching. In an effort to incorporate Diné culture and proper language, Dean Wesley Thomas as well as other NTU administrators will educate us and provide their expertise.

METHODS OF EVALUATION

We will be hosted by Dean Wesley Thomas of NTU, who will provide us feedback concerning the project’s development. We will design a questionnaire to provide the students at the conclusion of the project to receive their feedback as well. Our faculty will conduct nightly meetings to discuss the upcoming curricula for each day and analyze successes and areas for improvement from the previous day.

METHODS OF DOCUMENTATION

During the summer of 2016, keeping a blog throughout via our Facebook page (https://www.facebook.com/TheHeartbeatProject2016/) proved to be beneficial in terms of publicity and documentation. In addition, we were interviewed by two local newspapers and hope to meet with the interviewers again this summer. We will continue to conduct videos of our efforts for ideas on improvement and sustainability of the project.
ABOUT US

The Heartbeat Project is deeply important to us and our commitment as citizen-artists. Historically, European knowledge has been thrust upon indigenous communities while simultaneously their communal ways of learning have been destroyed. There has been a tragic history of Western Americans entering native space and disrespecting traditional customs through the integration of our own ways of living, with the belief that they are ‘superior’. On the opposite side of the spectrum, native people have repeatedly been the victims of Western voyeurism. Native culture and customs are placed on a pedestal, and their intrinsic humanity becomes removed in the process, resulting in a situation in which the actual people themselves are not served. Now more than ever, as today’s political climate is filled with hateful rhetoric and action towards many minority groups including indigenous people (i.e. the atrocities at Standing Rock), is an incredibly vital time for us to connect with the Native American communities and share an experience of cultural exchange through music—a language that speaks to and from the heart.

Our experiences during last year’s project have provided us with the cultural awareness and leadership experience to lead a team of new teaching artists into a space of conflict. We feel confident in our ability to share our knowledge while being open and receptive to the perspective of our colleagues and students at NTU. We are not afraid to accept that we don’t have all the answers, and that we cannot ‘fix’ relationships between indigenous people and ourselves.

The opportunity to continue The Heartbeat Project into the summer of 2017 will transform us as artists and as leaders. Music does not exist in a vacuum; rather, it is shaped by the life experiences of those who create it. The richer and broader our experiences, the more life we can breathe and pour into our music. Furthermore, the hands-on teaching experience is invaluable to our growing careers. We can refine our pedagogical skills, and in turn, inspire a higher level of excellence in ourselves as performers. This work will enable us to create music on a human level; which, after all, is why we chose to become musicians in the first place.