

# Advancing Conversations that intersect STEM and Racial Justice (STEM-RJ): Research Findings

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## Introduction

Through the [RAPID: Advancing Conversations that intersect STEM and Racial Justice \(STEM-RJ\)](#) project, Science Museum of Minnesota (SMM) staff collaborated with regional project groups representing the Twin Cities metro area and two areas in Greater Minnesota, prioritizing a process of community listening and accountability, to collectively develop ideas for utilizing the cultural anthropology and biological sciences content of the RACE: Are We So Different? exhibition and local science and cultural/ethnic knowledge to understand, process and act upon the traumatic impacts of systemic racism in our communities. This project was developed just a few weeks after the murder of George Floyd, and carried out from August 2020 through July 2021.

The Science Museum collaborated with these regional project groups to develop and facilitate virtual, STEM-informed activities for each community. The activities brought scientific and varied perspectives based on cultural ways of knowing together to understand, process, and act upon the impacts of systemic racism in the modern United States, specifically through the systems of criminal justice/policing, housing, education, and healthcare. The project was intended to strengthen a network of people across the state who are working to achieve racial justice (regional project group members and our staff project group included) by providing space to share knowledge, connections, challenges, and successes. We outlined the following goals of this project:

- Regional project group members and Science Museum staff strengthen social connections within and across their regional areas and feel a part of a statewide network of people working to achieve racial justice.
- Regional project group members and Science Museum staff collaboratively develop STEM-informed activities and participants of the activities feel the activities provide them with a supportive context to understand, process, and act upon the traumatic impacts of systemic racism in their communities.
- Science Museum staff and regional project group members create new resources that support informal science education practitioners and racial justice advocates to explore the intersections of STEM and racial justice, and to work together more collaboratively.

Further information and documentation about the process of conducting the project are available at [www.smm.org/stem-racial-justice](http://www.smm.org/stem-racial-justice). This website focuses on documenting the process of supporting community-based resources, the third bullet point above. The materials shared include resources for co-creation and co-research, both of which were attempted through this work.

Ultimately, this project proved challenging to complete as intended, and the research findings described here reflect that difficulty. These are shared in full transparency, not to discourage others but to provide opportunities for reflection and growth as the informal education field works to collaborate with community members in new and different ways.

## Summary of project activity

Through almost a year of work together, project teams from three sites across Minnesota (the Twin Cities, Fargo/Moorhead, and Rochester) worked to create publicly available products that would spur conversation about racial justice in their local communities.

The Fargo/Moorhead Group collaborated on a youth leadership development project, entitled “Honoring Our Minds In Exhausting Spaces” (H.O.M.I.E.S.). This leadership project consisted of 4 different presentations on visioning, critical thinking, non-violent communication, and personal branding, with opportunities for participants to form deeper connections with presenters and with one another. Delivered to 8 youth in the Fargo/Moorhead area in the 18-22 age group, this project created a sense of empowerment, togetherness, validation, and excitement for the future as these BIPOC youth continue to navigate white spaces (high schools, universities, STEM fields).

The Twin Cities Metro Group collaborated on an activism focused podcast, entitled “Twin Cities Activism And...” (which can be found on Spotify or at <https://www.twincitiesactivismand.com/>). This podcast zoomed in on the intersection between activism and other topics, including art, non-profits, life after incarceration, and STEM. By bringing in experts from around the Twin Cities and having meaningful conversations around how activism plays into their lives, this podcast widened the scope around how racial justice can be achieved through the diverse choices and paths that people make and take. This group also hosted a Q&A panel event with the podcast guests from “Activism and the Youth-led Response to the Murder of George Floyd”.

The Rochester Group collaborated on a racial justice and DEAI focused board game, entitled “Not So Trivial Pursuit”. They co-designed the game mechanics, selected game categories, built out over 100 potential questions, narrowed that down to approximately 60, hired an outside digital game designer, set up testing events, and hoped to ultimately create a physical version of the game to accompany the online version. The process was delayed, and ultimately, testing events had to be cancelled and the game was still in development by the end of the grant process, although all of the content elements were complete.

## Research findings

Three research questions were framed at the beginning of the project:

- 1) What kinds of virtual or in-person activities allow for community members to explore, understand or act upon the impacts of systemic racism in our communities? What are key features of those activities, from the perspective of participants? What are promising changes that community members report as a result of these activities? How are science-based resources perceived, and how do participants perceive they are learning STEM?

- 2) What supports allow the regional project group members and SMM staff to collaborate successfully, and what obstacles slow that work down? The supports examined should include resources, including STEM expertise and access to white-centered communities for SMM staff, and access to BIPOC-centered communities for regional group members.
- 3) How do local collaboratives define long-term success of their work, and how can they track their progress over time?

This report includes data and reflection on each question.

### **Question 1 – Activity impacts:**

Our intent was to use a joint survey with participants across all three sites, with a separate sampling plan and some specialized for each location to reflect their individual context. This worked successfully in Fargo/Moorhead, and results from this experience are described below, with more depth in Appendix A, page 7. In the Twin Cities, we tried two sampling plans: a link posted with the publicly available podcast, and personal invitations through the hosting event. The link turned out to solicit spammers (rather than actual listeners) and no surveys resulted from the hosting event despite numerous requests. We worked with other researchers to address this issue, but ultimately no surveys were received from either source. Finally, since the final product was not complete as of this writing, no survey was offered for the Rochester game.

In Fargo/Moorhead, the activity (a training for youth in racial justice, activism, and future planning for careers) proved successful according to its goals. The youth reported that the training was engaging; they gained confidence in their ability to navigate challenging spaces; most youth saw a connection between what they learned and their engagement with STEM. Youth began the training with an understanding of racial justice and systemic racism already, but the training allowed them to deepen and extend their understanding,

Ultimately, this question is not answerable given the data we could collect. The Fargo-Moorhead group's work suggests that their activities had a powerful impact on participants, but without comparable information from other sites, no broader lessons about activity features or types can be drawn. We will look for ways to collect comparable data from other projects and encourage other researchers to do so as well.

### **Question 2 – Community and Museum Partnership supports:**

In April 2021, all RPGMs took part in paired conversations with a predesigned protocol, which were designed to support reflection about the nature of collaboration within the project. This method was prioritized (over traditional interviews) to support relationship building and community/museum partnership, to support cross-site learning and to disrupt the traditional researcher role as recipient and meaning-maker. Researchers hoped to continue co-research by coding these conversations with community members and centering their voices in meaning making, but ultimately community members could not find time or did not show interest in the process and the work was carried out by museum staff. This is a possible outcome of using more

participatory approaches, since community members got to decide (rather than be told) what to do. In a longer project, there would have been more opportunities to circle back and try different approaches, or provide more scaffolding along the way. In this project, we had to work with the information and resources available to us at the time.

The findings from this process are described in detail in Appendix B, page 17. They include the reasons that community members decided to participate in the work, including prior work with SMM that had built trust, a feeling that the topic was important, and a belief that the project would be well-organized and their role would be important. Insights into how relationships were built and what sustains those relationships that can lead to trust are highlighted in the Pre-Development Process for Genuine Collaboration (Appendix C, page 32) and What Makes An Organization Trustworthy? (Appendix D, page 36). These insights help illustrate the possible successes and challenges of museum-community partnerships. Through listening to the voices of community members, museum staff can create projects that are more collaborative.

### **Question 3 — Local context and story-telling for long-term use:**

Our initial plan was to spend time in reflection with each site at the end of the project, jointly identifying where they hoped to move their communities, and to work together to establish ways to track that progress. Because the activity development took longer than anticipated, this work was shortened. SMM staff wrote up a summary of the work that each site did, using notes from meetings with RPGMs. These summaries were shared with RPGMs multiple times, with requests to comment, edit, download, or use these themselves. Our goals were to encourage RPGMs to have an accounting of their work that they could own, and to use this account to spark new work or funding with or without SMM involvement.

These Site Stories (Appendix E, page 38) form a partial answer to the question posed at the start of the project, a snapshot of the work done and possible future directions. They do not, however, set up the local sites for long-term tracking of their work. Their current and future use by each site is unknown.

### **Reflections on Process**

Any project where the research questions are not fully answered feels frustrating and this is no exception. This result may not be surprising, though, when we consider that this project was planned very quickly, in response to a local and national crisis in May 2021, and on a timeline that did not include community voices. The research questions were developed by museum staff, not jointly with community members. Our attempts as we started the project to engage community members in the research were received with some amount of engagement and enthusiasm, but as the project continued, community members appeared to become burned out on the work overall, including the research.

Selecting a participatory approach for the research was based on two guiding principles: we wanted to be in alignment with our response to the context that surrounded us in the work, and it was a reflection of our core SMM values of equity, learning, and collaboration. We knew that we were attempting to do something that was not done before, in the midst of an ongoing pandemic as well. We were committed to not replicating the experiences that RPGMs and their communities go through when it comes to racial injustices and social change. Given all this, we prepared as much as we could but we knew that there would be unanticipated challenges from both an internal and external standpoint. This report captures some of the ways in which we were successful with our research questions and some of the ways in which we are still learning to engage in work that centers community in authentic ways. We offer these to funders, researchers, and practitioners to consider for similar projects.

Finally, we believe it is worth noting that "success" by institutionalized standards cannot and should not be applied to what we were trying to do because we were precisely trying to not replicate oppressive norms and practices. We hope that this project serves as an example of not being afraid to take risks and try something different. Long-term change is rooted in efforts like these, if future work builds off what was tried here and in similar efforts. We encourage others to take similar risks and share their work as well.

## Appendix A:

# Fargo Moorhead Virtual Activity

## H.O.M.I.E.S. Leadership Training

### Who took the survey?

All seven youth who participated in the H.O.M.I.E.S. Leadership Training program on Saturday May 1, 2021 answered the survey (the questions are included on page 8 of this report). The group included 5 women and 2 men with Native American, Asian, Black, Hispanic or Latino/a/x, and White racial or ethnic identities. Most youth (5 of the 7) are LGBT+ or questioning. Two of the seven youth have not completed any college coursework. One has a college degree, and 4 have “some college,” which seems reflective of the fact that all youth were 23 years or younger. More detailed demographic information is available on page 7 of this report.

### Youth thought H.O.M.I.E.S. Leadership Training was engaging

Youth rated almost every feature of H.O.M.I.E.S. as “Very Engaging.” Three aspects received slightly lower ratings from some youth:

- Focus on immediate actions
- Ability to practice what was learned
- Opportunity to develop a clear action plan for next steps

Table 1. How engaging were the following features of H.O.M.I.E.S.? (n=7)

	Not at all engaging	A little engaging	Fairly engaging	Very engaging
Knowledge and information presented today	0	0	0	7
How identity drives purpose	0	0	0	7
Ability to apply knowledge to skills	0	0	0	7
A clear vision for activities	0	0	0	7
Opportunity for sustained involvement	0	0	0	7
Relevant to my community	0	0	0	7
Relevant to my culture	0	0	0	7
Ability to practice what you learned	0	0	1	6
Opportunity to develop a clear action plan for next steps	0	0	1	6
Focus on immediate actions	0	0	2	5

When asked what they found most engaging, youth described activities that gave them tools to apply to their lives-- specifically communication tools and mindsets.

*Question: What did you find most engaging about H.O.M.I.E.S.? (n=7)*

- I enjoyed all of the different sessions but especially the one about assumptions and drawing out the four corners in our lives in front of the group!
- I found the way that the event was broken down to be very engaging. All topics were relevant and there was usually an activity at the end that you could "test" yourself on what you had just learned.
- I loved all the conversations we had it made me feel empowered and confident
- I really enjoyed how each training focused on how we can retrain our minds and grow from that. Our growth really start with how we perceive things
- Personal Growth Exercises
- The Giraffe communication & the chart that came along with that activity, this is something I'll for sure use in the future.
- The Giraffe Communication Methods and paradigms. It distills what one needs to look for without any confusion. I will definitely use it moving forward.

### **Youth gained confidence and understanding**

Almost all (6 of the 7) youth agreed they gained confidence in their ability to develop a personal-professional brand and their ability to navigate exhausting spaces.

Many cited the way the program was facilitated as what contributed to their confidence along with the fact that it was centered in their experiences:

*Question: How did H.O.M.I.E.S. Leadership Training contributes to your confidence [to develop a personal=professional brand]? (n=6)*

- By making me feel welcome and being able to be transparent and myself with everyone
- Everyone's spirit gave me a feeling of I can do this, and if I ever doubt myself I know there's people I can reach out to for help.
- It helped me with understanding that the things that make me different are the things that add value to my life. So taking those extraordinary things and using them as a booster to my confidence instead of a weapon towards my confidence helps.
- Reminded me to keep my head up and stay true to my purpose.
- The presenters shared their personal stories and I could see myself being brave through their stories. Also, this space wasn't white centered and so it facilitated communication and transfer of ideas instead of focusing on race and acting differently.
- We all had an opportunity to share our opinions on different topics

*How did H.O.M.I.E.S. Leadership Training contributes to your confidence [to navigate exhausting spaces]? (n=6)*

- I learned that sometimes you can take a step back, acknowledge what the issue is and try to step out of it until you can recharge.
- It gave me the vocabulary to articulate the feelings I've been having and just by confirming that my intuition of discomfort in white and ignorant spaces is not an overreaction or state of crises internally.
- It honestly just made me more confident knowing my purpose in those spaces, to make it easier for later generations.
- It offered the paradigm of "me noticing." This paradigm allowed me to meet my needs first before others. It also allowed me to think more about actionable steps to meet those needs or strategies. The stories also allowed me to think that I am deserving and allowed to make change.
- Making sure that you take care of yourself seemed like a big theme. Exhausting spaces will always be around but how you apply yourself during those spaces is relevant to how exhausted you will be.
- Presenters gave personal techniques and real experiences to help.

Youth articulated their understanding of “personal-professional brand” and “exhausting spaces” in the following comments:

*How would you describe your understanding of personal-professional brand? (n=7)*

- A personal-professional brand is how you present yourself and how others view you based on your actions.
- A personal-professional brand is the establishment of your personality in a universal setting. I see this as how you present yourself to the public and professional settings like the workplace
- I think personal professional brand means how you want the world and your future employers to see you
- I wish I would have taken better notes of the presentation because I was not able to reflect as much after because of not taking good notes.
- I would say that your brand defines who you are in all settings. It's the base for what people will perceive when they hear about you or meet you themselves.
- It's an impression based on your skills and character and how it is perceived the the macro level. People use that to judge and interact with you.
- My personal professional brand is how I present myself in moments that I'm not with my family or friends. I am usually more aware of how I'm speaking and how I promote myself. I try to be a more square version of myself but that being said it is still a version of myself.

*How would you describe your understanding of exhausting spaces? (n=7)*

- A space that drains you because of having to conform or fight for your identity.
- An exhausting space is a place that has a culture that is negatively draining.
- Exhausting spaces are any place that uses too much of my energy and doesn't return.

- Exhausting spaces pull from our identity as we have to question and reinterpret certain things about ourselves in those spaces.
- I think I have a good grasp ! I LOVE LOVE LOVED everything about what was taught and how it was taught and wish i could do it again it was so lovely. Can't wait to use the skills and comfort other folks especially younger and be hopefully a sense of relief.
- Making decisions and learning the response behind it
- Spaces that weren't built for you Spaces that you are the token minority Spaces that make you feel uncomfortable or "itchy"

### **Most youth found a connection to STEM**

Five of the seven youth said they saw a connection between STEM and what they learned and did in *H.O.M.I.E.S.* Three mentioned how STEM spaces can be exhausting and two described the fact that STEM is present in many aspects of our lives.

*Do you feel like H.O.M.I.E.S. connects to Science, Technology, Engineering or Math (STEM)? Why or why not? (n=7)*

Yes

- I don't think particularly it was geared to address colonization or racism in these area like it was in how we talk and write and see but I think it is definitely important to address where in these fields there is bias and where are areas of confrontation necessary.
- I think it could. STEM spaces are known for discriminatory behavior so it's helpful to learn how to navigate who you are as a person in those spaces while simultaneously taking care of yourself and remaining true to your brand.
- Yes, because bipoc are needing support to work through the exhausting spaces in STEM.
- Yes, we talked about things that are ever changing and that can be connected to technology or ideas.
- Yes. When one thinks about stem, they think about inanimate objects and abstract concepts. However, as I learned from one of the presenters, it has people behind it. Behind Google is people. Likewise, behind STEM are also people. This training allows for better interactions and tools to navigate spaces that are predominantly white.

No

- From what I've seen I don't think it connects to engineering, technology or math but I could see H.O.M.I.E.S connect to science
- I feel like HOMIES is dealt more with social/human science and sociology

### **There was an existing understanding of the impacts of systemic racism in communities.**

All seven youth stated they knew “a fair amount” or “a lot” about systemic racism before participating in *H.O.M.I.E.S.* They mentioned that systemic racism occurs in schools, impacts incarceration rates, is reflected in laws and policies, and even infiltrates how BIPOC people view themselves.

Table 2: Before participating in H.O.M.I.E.S., how much did you already know about systemic racism in communities? (n=7)

	Count
A lot	1
A fair amount	6
A little	0
Not much	0
Nothing	0

What are some of the things that you already knew about systemic racism in communities? (n=7)

- I knew a lot about how it's rooted in our everyday lives. How in schooling people of color are set back, how prisons serve as modern day slavery and why people of color are subject to that.
- I knew that systemic racism takes away the autonomous rights which most privileged populations are allowed such as the method of justice and sentencing of black and latino populations is a systemic issue. School to prison pipeline is something which I have been learning about. As well as systemic racism denies many communities the same opportunities as the majority in order to further suppress their mobility between socioeconomic roles and control over their own lives and communities by lessening their ability's to speak and express their truths and exhausted experience.
- I know that a lot of policies and laws have been created to keep a group of people behind. Some of these policies are still here and some of the damage from those policies have communities trying to play catch up.
- Is a form of racism that is embedded through laws within society or an organization.
- It is consistent in almost every social setting either in small or large proportions
- It is cyclical. It is made of racist policies. It is often invisible as laws can have different interpretations, thus harming BIPOC. The phrase systemic racism doesn't bring about change. According the Ibram X. Kendi, it is very abstract. So it is better to refer to it as a racist collection of laws. It conjures up images that are tangible, not abstract. Racism is dangerous and persistent because it is invisible. We can't fix what what is hard to see.
- Systemic racism impacts bipoc in every aspect of our lives. It impacts the way we live, the way we think, and the way we view ourselves.

## H.O.M.I.E.S. provided youth an opportunity to explore and understand the impacts of systemic racism in communities

All seven youth generally agreed that H.O.M.I.E.S. provided opportunities to explore and understand the impacts of system racism. A consistent theme in what youth took away from the program was the psychological impacts of systemic racism.

*Thinking about your participation in H.O.M.I.E.S. today, how much do you agree/disagree with the following statement? (n=7)*

	Strongly disagree	Disagree	Agree	Strongly agree
It provided opportunities for me to explore the impacts of systemic racism in communities.	0	0	5	2
It provided experiences that helped me understand the impacts of systemic racism in communities.	0	0	4	3

*Thinking about your participation in H.O.M.I.E.S., what are some of your takeaways about the impacts of system racism in communities? (n=7)*

- How Black people and minorities tend to live and in a low income communities
- I believe a takeaway is knowing how to break away from that system of racism
- It can spoil your brain if you let it, and you have to allow yourself relief from exhausting spaces.
- It puts you in a very restrict spot. We often take in negative or positive stereotypes and beliefs into our minds and we treat ourselves based off of that. It's time we minimize the impacts of racism by banding together and talk about our experiences.
- Systemic racism can best be countered through shared reflection between generations as well as purposeful discussion amongst young people. I think it would be helpful for me after this training like right now to go further into research of where in FM area are specific developments of systemic racism.
- Systemic racism is harmful and takes away joy and peace from people. This country wasn't built for us but we can continue to try to rise above and try to make change that is progressive.
- That recognizing it in your community is the first step to being able to fight against it. Knowing what it looks like in your community leads you learn wha it takes to dismantle it. It is present everywhere, so even if you have not noticed it, dig a little and you will find how systemic racism is present near you

## Demographics

Table 1. With which racial or ethnic group(s) do you identify? (select all that apply) (n=7)

	Count
American Indian or Alaskan Native	1
Asian	2
Black or African American	3
Hispanic or Latino	1
White	1

Table 2. Do you identify as LGBT+? (Lesbian, Gay, Bisexual, Transgender, +) (n=7)

	Count
Yes	4
No	2
Not sure or questioning	1

Table 3. Which of the following categories best represents your highest level of education? (n=7)

	Count
Some high school	1
High school degree	1
Some college	4
College degree	1

## Survey Instrument

### 1) How engaging were the following features of H.O.M.I.E.S.?

	Not at all engaging	A little engaging	Fairly engaging	Very engaging
Knowledge and information presented today	( )	( )	( )	( )
How identity drives purpose	( )	( )	( )	( )
Focus on immediate actions	( )	( )	( )	( )
Ability to practice what you learned	( )	( )	( )	( )
Ability to apply knowledge to skills	( )	( )	( )	( )
Opportunity to develop a clear action plan for next steps	( )	( )	( )	( )
Relevant to my community	( )	( )	( )	( )
Relevant to my culture	( )	( )	( )	( )
A clear vision for activities	( )	( )	( )	( )

### 2) What did you find most engaging about H.O.M.I.E.S.?

### 3) Did you gain confidence in your ability to develop a personal-professional brand?

- ( ) Yes
- ( ) No
- ( ) I don't know

**3a) [If Yes] How did H.O.M.I.E.S. Leadership Training contribute to your confidence?**

**3b) [If No, or I don't know] Please share more about your response to the last question.**

### 4) How would you describe your understanding of personal-professional brand?

### 5) Did you gain confidence in your ability to navigate exhausting spaces?

- ( ) Yes
- ( ) No
- ( ) I don't know

**5a) [If Yes] How did H.O.M.I.E.S. Leadership training contribute to your confidence to navigate exhausting spaces?**

**5b) [If No, or I don't know] Please share more about your response to the last question.**

### 6) How would you describe your understanding of exhausting spaces?

*We acknowledge the history of STEM (Science, Technology, Engineering and Math) being presented in a narrowly defined way that has contributed to furthering systemic oppression. We want to disrupt that narrative and invite you to consider STEM as present in multiple ways of knowing about the world.*

### 7) Do you feel like H.O.M.I.E.S. connects to Science, Technology, Engineering or Math (STEM)?

**Why or why not?**

**We are asking the following questions to better understand how activities like H.O.M.I.E.S. can help people understand the impacts of systemic racism in communities.**

*The phrase systemic racism is used to talk about all of the policies and practices entrenched in established institutions that harm certain racial groups and help others. "Systemic" distinguishes what's happening here from individual racism or overt discrimination, and refers to the way this operates in major parts of US society: the economy, politics, education, and more...systemic racism is some of the best shorthand we have to explain why there's still so much inequality in American life. (Jenée Desmond-Harris, [www.vox.com/2015/4/23/8482799/systemic-racism-explained-examples](http://www.vox.com/2015/4/23/8482799/systemic-racism-explained-examples))*

**8) Before participating in H.O.M.I.E.S., how much did you already know about systemic racism in communities?**

Nothing       Not much     A little               A fair amount       A lot

**9) What are some of the things that you already knew about systemic racism in communities?**

**10) Thinking about participation in H.O.M.I.E.S. today, how much do you agree/disagree with the following statements?**

	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly agree</b>
It provided opportunities for me to explore the impacts of systemic racism in communities.	()	()	()	()
It provided experiences that helped me understand the impacts of systemic racism in communities.	()	()	()	()

**11) Thinking about your participation in H.O.M.I.E.S., what are some of your takeaways about the impacts of system racism in communities?**

## Demographics

For the last set of questions, we want to know a little bit about you in order to understand where gaps may exist in what is offered. We prioritize equity, access, and inclusion and need to understand who is participating in order to address differences in experience. You may skip any or all of these questions.

### 12) What is your age?

### 13) With which racial or ethnic group(s) do you identify? (Select all that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> American Indian or Alaskan Native | <input type="checkbox"/> Native Hawaiian or Pacific Islander |
| <input type="checkbox"/> Asian                             | <input type="checkbox"/> White                               |
| <input type="checkbox"/> Black or African American         | <input type="checkbox"/> Prefer to self describe:            |
| <input type="checkbox"/> Hispanic or Latino                | <input type="checkbox"/> Prefer not to say                   |

### 14) Do you identify as LGBT+? (Lesbian, Gay, Bisexual, Transgender, +)

- |                              |   |
|------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Not sure, or questioning |
| <input type="checkbox"/> No  | <input type="checkbox"/> Prefer not to say        |

### 15) Do you have a permanent or temporary disability?

- Yes
- No
- Prefer not to say

### 16) How would you describe the disability? (Select all that apply)

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> Mobility | <input type="checkbox"/> Cognitive         |
| <input type="checkbox"/> Learning | <input type="checkbox"/> Auditory          |
| <input type="checkbox"/> Visual   | <input type="checkbox"/> Other:            |
|                                   | <input type="checkbox"/> Prefer not to say |

### 17) Which of the following categories best represents your highest level of education?

- |   |   |
|---|---|
| <input type="checkbox"/> Some high school   | <input type="checkbox"/> Some graduate work |
| <input type="checkbox"/> High school degree | <input type="checkbox"/> Graduate degree    |
| <input type="checkbox"/> Some college       | <input type="checkbox"/> Other:             |
| <input type="checkbox"/> College degree     | <input type="checkbox"/> Prefer not to say  |

### 18) What is your gender?

- Male
- Female
- Prefer to self describe:
- Prefer not to say

## Appendix B:

# Research Question 2: Relationship-Building

*In April 2021, community members were paired up and asked about their experiences so far in the project when it came to building relationships with an organization, with fellow community members in their regional group, and across regional groups.*

*The following analysis highlights some key takeaways from those paired conversations. Quotes that emphasize each list are at the end of this document. This data also digs into STEM RJ Research Question 2, “What supports allow the regional project group members and SMM staff to collaborate successfully, and what obstacles slow that work down? The supports examined should include resources, including STEM expertise and access to white-centered communities for SMM staff, and access to BIPOC-centered communities for regional group members.”*

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### **Who was involved from communities? Why did they want to engage in collaboration?**

Most community members recruited for the project already had prior connections to SMM, whether through prior engagement in SMM projects and exhibits/programming or even prior employment at SMM. Depending on their existing connections to SMM, community members involved in this project heard about it in a variety of ways.

- Invited directly by SMM staff
- Through an employer
- Invited by a different RPGM who was already recruited to participate
- An email advertising the project through a school news website

Community members wanted to be involved because of their previous positive experiences with SMM, the potential impacts for communities with a project like this, and the idea of addressing systemic injustices using both STEM and social justice. One community member valued the opportunity for the project to build connections between BIPOC youth and SMM.

Many aspects of the project resonated with people’s lived experiences and interests around racial justice. Some mentioned the connections the project could create for helping BIPOC youth become interested and identify as someone who could pursue a STEM career. SMM’s approach to sharing space with community, centering the community, and authentic co-creation were mentioned as aspects of the project that resonated with people. For some people, the involvement of other organizations and the opportunity to get to know others doing this work was appealing. And, one person talked about the project being an opportunity to deepen their organization’s connection with SMM and have an influence on the future of SMM’s equity work.

There were some things that community members carefully considered before agreeing to be involved. A few talked about grappling with what would actually happen during and as a result of the project, and if there would be a genuine, meaningful impact of the project’s work. One person cited concerns about how data from the project might be used or misused, including a perception of the project being carried out by an organization they perceived as being led by or having stakeholders who were predominantly white males and associated concerns around general historical manipulation of data by white-led organizations. A few people mentioned worries about the time commitment that might be needed for

this work, in addition to worries about the support needed to move this work forward. One person grappled with the language in the project and variations in how people conceptualize different terms like community, social justice, and racial justice.

### **How did community members see themselves contributing to this project and the work of using STEM to dismantle systemic racism?**

Community members had various understandings of their role and how they would contribute to the project even before the project started. One community member shared that they intentionally did not want to take up a leadership role in their group. Some community members shared how they were confused and unsure about their role in the project, especially at the beginning, and what they were being asked to do.

- Bring individual skills, experiences, knowledge, and resources
- Supportive group member
- Take action
- Be a learner
- Do research
- Did not want to take on a leadership role
- Unsure/confused about role

### **How did relationships between community members and SMM develop throughout this project?**

Community members identified some key things that helped them develop their relationship with SMM. What was mentioned most often was being compensated for what they brought to the table. This was more than just financial compensation; it was also seen as investing in people and acknowledging their value and worth.

- Paying people for their time
- Talking about and doing things with RPGMs beyond the STEM RJ project
- Being honest
- Clear, consistent communication
- Including the voices of those who usually aren't included

The two most important ways that community members saw SMM providing support was funding for their virtual activities and having a dedicated staff person who offered direct assistance with whatever they needed to complete their work in regional groups.

- Funding for community to do important work as defined by them, not SMM
- SMM staff providing direct support to meet group needs and encourage progress
  - Sharing/gathering information for the group
  - Facilitating group processes
  - Technical support (e.g. creating Google Docs)
  - Redirecting group discussions
  - Giving suggestions for group decision-making
  - Contacting those who missed meetings to keep everyone on track
  - Encourage group member interactions
  - Reminding groups of the work to do in between meetings and deadlines

There were only a few things identified by community members as not working well when it came to building relationships. Most mentioned that things were fine and there were no issues for them. Other things that were shared were only mentioned once by someone.

- Everything has been going okay
- Maintaining consistent and timely communication
- Aligning mission and vision of SMM and others involved

- Not knowing why certain decisions were made, without RPGM input, that affected relationships

However, community members were able to identify quite a few challenges that made it difficult, at times, to fully engage in the project and be present with each other.

- Technology
- Capacity to take on the work as it emerged
- Finding shared time to meet and get work done
- Group makeup - who is in the group and their ways of working
- Working virtually

When it came to SMM responding to any frustrations or concerns brought up by community members, most did not see any issues or they expressed that it was handled without giving specifics. A few community members who did identify what they felt was frustrating about group dynamics also mentioned that it was not solely the responsibility of SMM to address it.

- Not too many concerns brought up and any were addressed quickly
- Group dynamics

### **How did relationships within regional groups develop throughout this project? Between regional groups? Other kinds of relationships?**

When it came to regional groups, some individuals had pre-existing relationships before the project. New relationships, and in some cases new partnerships, developed because of the project. For some, the relationships and partnerships that were developed will extend beyond the life of the project. Some people described the positive collaborative working relationships among group members within the region over the course of the project. One person mentioned the value of the variety of people involved in the project.

Across regional groups, a common theme was that participants wanted more opportunities to get to know each other. Some people also recognized that even with the opportunities provided they didn't always have the time or availability to participate. A few people provided ideas of ways the project could have helped to foster relationship building across the regional groups during the projects, as well as ideas to stay connected after. One person talked about trying to set up a collaboration across regions, but it didn't come to fruition because of busy schedules. A few people talked about the value of the variety of people involved in the project in terms of the opportunities to make connections and learn from each other. This included both connecting with people doing similar work as well as opportunities to connect and learn from people working on different aspects of DEI.

### **What other insights did community members have to share?**

Community members shared other insights for developing relationships as well as questions/concerns they still had about the project.

- Having a shared experience at the beginning
- Having a shared experience at the end
- Who is the grant funder?
- What happens after "the end" of STEM RJ? Explore possibilities
- This project happened with a lot of other things going on around us and how that may impact decisions
- There will some missing voices from the project, especially young people

# DATA

## Who was involved from communities? Why did they want to engage in collaboration?

### Connections to SMM and reasons for collaborating

- I was a part of the Science Museum's [name of an SMM project]...I think [name of region] may have been one of those locations also and so we had it here in the community. I was part of that planning group... As I heard again about a project coming forward, I already was pretty impressed from the first go around with the Science Museum structure around how to facilitate community engagement... by time this one came around... I was okay, I'm going to jump back in with it. And the concept around the STEM was definitely an idea which I hadn't been a part of intentionally and so I really approached it from a growth opportunity.
- I got involved with the [name of an SMM project]... through the RACE exhibit and there was an outreach program...and ...the story circles... And that's why I met some more staff including Robby and so, we got a chance to talk. So when this project came along, he thought I might be interested, he reached out... And one of the things that Robby and I talked about very early on is this engagement beyond an exhibit, beyond doing research and it being ongoing. And I was already familiar with what was already being done. And so for them to just want to continue doing the work and dig a little bit deeper and also reach out into the community. There are kinds of institutions, organizations, museums, whoever, social service organizations, government organizations; people will plan things in an office, and they'll do unto community and this seemed like a project that is in line with how I like to work which is with community.
- I got involved because when the Race exhibit came to [name of region] I did the [SMM programming]. So it was like a three-day...and it was one of the most meaningful experiences I think I've had in terms of learning and having conversations about race. And so when I saw this opportunity come up, I was like, oh, great, absolutely. That was really meaningful. And I felt as though I learned, but I was also able to use whatever I learned to share and the hope was in getting involved with this, the same thing would happen, right? That I would learn but I would also have opportunities to have an impact on my community.
- I actually had worked on the updated Race exhibit... I felt like this would be a continuation of engaging around science, technology, race and bringing it out into the community and connecting it back to that exhibit.
- I believe it would be a great opportunity to share space with other youth program leaders and build something to help bridge a gap between BIPOC youth and the science museum.

### Recruitment

- So [RPGM name] called me about this project. Essentially, what he was saying was like, this is a way to make an impact and a change in a community. And so I kind of asked him, was this movement work or was this just an event type of thing? And so he was saying it was a little bit of both. And so I was interested and intrigued because he said [RPGM name] was also from the project, which I know [RPGM name] very well because we both worked at the [organization name] together, and so I was pretty interested in that. And then me and Robby had a long conversation for about an hour and a half. So Robby kind of sold the program to me.

### Lived experiences

- I was a science teacher and one thing that I realized really quickly is a lot of our underrepresented students didn't view or perceive science as something that they should be engaged with, right? So it was high school, so ninth grade. So they came into the classroom already feeling and thinking that this was not something for them and so, I thought that this

would be a good opportunity to kind of connect those dots because I have always been trying to do that. They don't really see themselves represented in any science profession. So, I don't know a lot of the doctors and astronauts and whoever that they've seen haven't been them and they haven't had that opportunity to connect their own identity with being involved in any STEM field. So, there's a little bit of a hidden passion in there in connecting STEM with especially our BIPOC students who don't always really see themselves as people who should be engaged in that field.

- So for me I think it kind of stems from my whole entire undergrad experience... I had the focus of wanting to become a doctor and I guess I face a lot of hardships along the way because being a first generation student and not having anybody in my family who is in the medical field. So kind of going through that process and kind of experiencing a lot of hardships like I mentioned, I wanted to get more involved in the community. So then I've always been working with the Somali community in [name of region] or I've been trying to create an organization at my school to help Hmong students excel and find different pathways and whatnot. And so, then this past fall I was looking at our weekly newsletter from the school and it had a little info about the SMM. And I thought it was a great opportunity for me to kind of work for the Science Museum and kind of branch out and work on a more scientific and a base level and kind of do more research on how I can be more impactful in the community as a whole.
- I've worked with and have worked with people who have been adversely impacted by the criminal justice system. ... I have a lot of young people that say to me: I like math and science. And I think, wow, how do I get them involved? How do I do that? And so, I just kind of felt this was a place, the Science Museum of Minnesota, and back when I first saw the Race exhibit, I felt, wow they see me and I think I was just going back through for another look or something and I bumped into [SMM staff name] and in the Science Museum and that's how I kind of little by little was in it. So, any opportunity that I had to do something else, as packed as my schedule is, I felt like I gotta fit 'em in, I got to do this. As I've said, I've done things with other institutions, the prison system, but I felt like this felt more inclusive than any of the others.
- I saw an opportunity to voice out my own opinion and my experiences as the person of color, but trying to have a career in a STEM related field. So, I think it was something that I can actually relate to. So that's what got me involved into the project. And also, to be there and able to research more what kind of experiences people of color face and how can we overcome those challenges.
- The Science Museum has shown me that they know how to share space and they know how to put valuable things within that space. And so that drew me in.
- I was doing a lot of focus groups with Indigenous communities and one of those was very much centered on co-creation and collaboration, and partnership. What makes you want to work with somebody and why? And I was hearing a lot of responses like partnership outreach from museums and other institutions can be so phony and they don't really want us to have input; they don't really care what it is that we think; they just want us to serve their needs. And so having just finished that and then coming out here and having this opportunity to sort of take time to define what co-creation means with community leaders seemed like a natural progression for me.
- The project goal that we discussed in the group was centered in creating space for BIPOC youth. That is what resonated the most because everything we are a part of is centered in whiteness. As Black woman... typically my lived experience has been ignored, or told by represented from communities and community members that look like me. My experience in Ed has typically been from a deficit this helps me to think about our shared learning experiences as a strength.
- I saw that there was so many organizations involved with this.

- I think naturally the thing I was more excited about than the Museum's involvement in the project was the opportunity to get to know a lot of people that the Museum had identified as community leaders in one way or another...And I was really excited to get to know folks. And not just folks in the [name of region] but folks in two other areas.
- I have been wanting to deepen my relationship with the Science Museum and the community that works with the Science Museum because our organization, we are really around technology and community...I'm excited about the community that works around the Science Museum and particularly the work with young people and the Kitty Anderson [Youth Science Center]. So connecting all those dots. It's like this is a really good way to build a partnership in a relationship with an institution that we're trying to influence and help inform and guide them as they're grappling with their notion of race, exhibit curation and internal structure as an organization.

#### **Concerns before starting the project**

- As I got into it and after that first night, I really started asking myself, do I want to get into another project where we're not going to actually do anything? There's a specialty in DEI now. There is a lot of theory and a lot of information but very few programs or projects have anything to do with something practical. What can I put my hands to?
- I think the one thing that I grappled on was, it wasn't even with the museum in general, it was about all these organizations that were coming up [with] statements against police brutality and just felt very performative. A lot of this has been happening for a while. It feels like just now people have noticed. And even now most everything that has happened, still not much has changed, and I just was a little bit concerned thinking about overall, is this going to be doing genuine impact? Or is it gonna be just a one and done type of thing.
- The thing I grapple with is this idea of social justice being invested by white powers because I'm more than positive that the Science Museum or the stakeholders of the Science Museum are all white men and so that to me was a little weary because I think the things that even if like a large impact or change came about this, then a lot of times this data can be manipulated and used for things that it should not be used for. And so that was what had me a little weary, if I'm being just transparent.
- You all might be getting paid to do the work that y'all do, but y'all might not necessarily have control over what is done with that data? And I think that, that's just something that happens over time is that you notice that people will put funding into things and you never know what's about to happen with the data. And so I would say I'm not too concerned anymore but it's still yes, still a lingering thought like white supremacy perpetuates itself in a lot of things but specifically data.
- Time allocation and support and how we move forward with longevity of this work.
- I grappled with the use of terms, and community because community means different things to different people. Social justice, racial justice means different things to different people. In the preliminary write up for the grant and in the wording that was chosen and used, I had to sit with it for a while, and really think about it because some people community means organizations who serve community. So other folks, it means people at the grassroots level who are not necessarily connected with large- or large-scale organizations. And so I grappled a lot with that.

#### **How did community members see themselves contributing to this project and the work of using STEM to dismantle systemic racism?**

##### **Bring individual skills, experiences, knowledge, and resources**

- So quite honestly, I know that I could bring, I know I brought a lot of skill. I bring a lot of skill sets to the table

- And so we looked at our abilities and we looked at the skill sets that we have and we started thinking, okay, we know what we're capable of doing, we know our abilities, but how can we take these things, make them gel and come up with the product or come up with a project that would be meaningful for everyone and have everyone's input?
- just trying to contribute with ideas
- my wifi was pretty strong
- my networking abilities were pretty strong
- I knew that I would be able to be a resource
- Ideation is one of my strengths. So creating the ability to be an ideator,
- I think everyone has their own unique perspective or unique experiences and I think that's what governs my role in the project... I think adds a sense of value to the project, and maybe seeing some loopholes or seeing some barriers that other community members may not be able to see.
- I think that my role within the project is as a young adult, I have a different perspective than sometimes the older crew does and I totally appreciate their perspective as well, but I think, sometimes we're not thinking about the newer generations that will be coming in and the newer generations that will be using these tools, and so I think just having my voice be there has been really impactful.
- I understood my role as a creative. Like a joint creative Director of contributing to missing narratives.

#### **Supportive group member**

- We even had one of our fellas that was [dealing with personal issues]...for the last two months...and so we continued to work but it was never this feeling of somebody's not putting in their own effort and so even if he wasn't available at times, we understood that he was still engaged and so...and I knew that part of my role was going to be that.
- adding what I could with what I have added my part to the pie. I think that was my contribution.
- But ultimately, I think we all kind of leaned on each other for that next part of building because we were so community, or we were so team or people oriented, making sure everybody in the team had a voice or how to say, and that decisions weren't made without another.
- I love to be a supportive team member, and that's kind of the role I've taken on.

#### **Take action**

- For myself, I think, as far as contribution, you don't get recruited to a team unless you can produce results or contribute to those results.
- get the ball rolling
- getting people back on track
- role-wise, I think I'm a really good, just tell me what to do and I'll do it, kind of person.

#### **Be a learner**

- also learn a lot

#### **Do research**

- giving the feedback for research,

#### **Did not want to take on a leadership role**

- my role on teams tends to be a lot more with the leadership and the structure and so one of the things I was mindful of was that, before I even knew who the group members were, I didn't want, I mean I like that role and that's the role I'll usually gravitate towards, but I also don't like that role, especially within community-led projects because people's involvement tends to, we're all busy, you know? Even me I'm super busy. And so, to lead another project was something that I went into [this]...not wanting to do.

#### **Unsure/confused about role**

- Yeah, I didn't really know. We didn't really know what the role was. My basic understanding was

you're gonna get together with a group of people that are somewhat like-minded and think about racial justice in STEM and that may show up in 100 different ways and it's your job to figure out, narrow it down, and get it done within this time period. That was my role. And if you have an agenda and if it fits, connect the dots.

- Initially I think for the first what month probably I did not have clarity about what we were doing at all. And so I was like this sounds really good but it's really ambiguous and I'm not really sure what we're trying to do. Are we creating a service, a product? Are we just having conversations? Are we going back to our communities? Because I think initially, I thought it was almost like a co-design model where we are given questions and then go back to our communities and ask them and then return and then kind of create something. But I quickly realized that wasn't it. So I understand that we're trying to make it as broad as possible so as to not narrow our thinking but at the same time I think it created a little bit of confusion, right?
- When I first started, when we first had our first meeting, I was, sure, I knew what the project was about and its essence but I didn't exactly know my role because that was a large group meeting and I was, oh so we're gonna be working with 20 different other people but later on I found out we're working with our regional groups.
- When we first started, I was okay, I know what it is about but what, what role would I play? What role that would help build up the project in a better way? The first meeting was like, okay I'm kind of getting this but then what could I do to make it much better, so I'm asking myself most of those questions

### **How did relationships between community members and SMM develop throughout this project?**

#### **Paying people for their time**

- one of the things I was most impressed about was that the Science Museum put their money where their mouth is, so to speak? They, it wasn't just them asking us to do something. But they, it was even if it hadn't been the amount that it was, it was the fact that they were willing to see the value of our time...You know, I would have probably done this project for free but you know it just seeing that and allowing that stuff to happen. It was really cool to know that someone value our time. That was what was one of the things that was most important to me was having my time
- having it be a paid position was really exciting. I've done work for museums before for free and got little to nothing in return. And so it's nice to be compensated for our time and energy.
- SMM kind of being that support system and helping us financially, I think that also has helped to build a strong relationship on their interest of our project and kind of everything as a whole.

#### **Talking and doing things beyond the STEM RJ project**

- we have to have a way that people stay engaged and stay involved
- being invited to other things...events that was outside of this kind of was like, we appreciate y'all as people, you are not just doing this project and we just gonna let y'all be or whatever,
- talking about other things that they [SMM] did with you all, let me know that you're not just a one-stop and then, all right, you all just finish this project and just let us go and not try to keep building or building on what we've already built.
- I have seen so many organizations, and you all too, organizations not even wanting to do anything during this time period. And so this project was put together and manifested with an unknown that we've all, that we've never had. And so for staff to be able to do that and go through all the bureaucratic work with both pursuing a grant, and then getting it off the ground, and having staff behind that, and reaching out to folks and all of these different communities, that takes dedication. It takes a lot of work.
- We are working with the SMM in establishing ways together to secure working capital IP, space,

staff, build capacity ect among each other. commissioning and sharing power with community orgs, leaders, helping us to represent and support the BIPOC Experience.

#### **Being honest**

- transparency, if something can't happen I haven't heard people talking in code about it or whatever, it's just very up front. Like this can't happen, or this can't happen...because all of those things for me, at that, that level of, if things get real, these people can support or do they best to support.

#### **Clear, consistent communication**

- the emails pretty clear and they're always up to date with their communications. And I think one way to get along and to make sure that you doing the right thing and you heading the right path is having to play a communications and having that sense of duty. And I think that is some of the things that has helped me actually to work and build a relationship with the SMM.

#### **Including the voices of those who usually aren't included**

- I think the biggest thing is the youth voice aspect because I think that's very, not new, but new to different organizations. Very rarely are they gonna include youth in their work or their research. And I think that's one thing that the Science Museum has offered that I have not seen in many other places at all.

#### **Funding for community to do important work as defined by them, not SMM**

- I think it's really powerful that the institution has decided to hand funding over to a group of community members and say create what you want, create what your community needs. And especially in the time of COVID and we're all struggling to connect with community.

#### **SMM staff providing direct support to meet group needs and encourage progress**

- David, he has been awesome. He's been a wealth of information for us
- David's been a key pillar in our meetings and we are very idealistic group and he has definitely found a way to continue to create creativity of thoughts, but then also moving us along...wherever there may have been a stalemate or if the ideas are like we want to include everybody so therefore our attempt to include everybody prevents us from doing anything and he navigated us through that intentionally, unintentionally but it wasn't like a big deal....He just really kind of reframed thoughts, helped organize thoughts with Google Docs and it really moved us through those times where we were just sort of just spinning around continuously ideating.
- as it pertains to David. Because I'm, we have, our ideas were really pie in the sky at first and he just started helping us to put those ideas into a perspective that guided us in a direction and he said you all have to make a choice of some things.
- we began to trust David to help us. And the thing was, is that even though he was helping us, he was more coaching than giving us ideas.
- He was coaching us through the process, and that was something that allowed us to come to our own decision. That allowed us to come to really take control of the project ourselves because his coaching pushed us and in the into the framework that we were really looking for, and that was really important. And that was where the trust really began, is that he didn't come to take our narrative. He came to coach us through the narrative that we developed together and that was where the trust really began.
- David was good at contacting and contacting me and saying, okay, here's what you're missed, here's what you missed.
- David...have been so helpful...kind of lead us right along
- And we are still very dependent on David in our co-creation making. Of still helping us guide, because of the capacity, to keep us focused and eye on the prize because meetings are great but it's that in between co-creation, when we're on our own, that still requires support, resource, all of those pieces to actually make sure that it's happening. [ID14: The homework.] Yes. And we

just got a reminder 'hey y'all, we met...and these are the commitments y'all did. How's it going?' I needed that.

- David's good about gentle probing, right? [ID07: Without taking over. Even though we want him to, sometimes.] Exactly. Otherwise we'll get kind of lost in our own lives and work and not get our stuff done. [ID07:] And that also demonstrates a level of trust with him too that he understands what we're talking about to be able to keep us moving in that direction.
- David has been such a great help in kind of facilitating our work, because I felt at times us not being able to connect with our group members on a personal level, sometimes it may be awkward to kind of reach out to them and finish an assignment or something. But having David there to really push us and like push that interaction between us, I think that has really built a strong relationship between our group members.

#### **Everything has been going okay**

- I can't think of too many things, really, that dampered or made it hard to work well together.
- It's gone, really, really smoothly. And then, whenever there is a hiccup, it's cleaned up pretty, pretty fast.
- I think everything's been working. Well, I don't think there's anything that stands out at least to me.
- I don't think we've had any really big challenges or any concerns or frustrations.

#### **Maintaining consistent and timely communication**

- keeping all of the, it has been a lot going on with the research roles, having different experiences, bringing, keeping it all, keeping up, keeping it all together. I think in keeping that communication with us, I would have, and I feel sometimes we don't get what we needed at a particular time.

#### **Aligning mission and vision of SMM and others involved**

- Jointly aligning program missions or visions for the greater good could be stronger

#### **Not knowing why certain decisions were made, without RPGM input, that affected relationships**

- we had a note taker that was a part of our regional group that really contributed to...the group and then they were gone. And so that was sad for us because we had built relationship with them and then they disappeared. So just one point is when you bring people into the group and you build that community, taking them out does have an impact. And we didn't have a say in that, they were just gone. I'm not sure why they were pulled out. I think they thought they were just an extra person but they actually contributed to the community as we interacted with each other.

#### **Technology**

- I just never use Google Teams outside of this. I just always use Zoom or FaceTime, so that's kind of a hurdle because even today trying to find a Google Teams, usually you click on your calendar, you can go to whatever from there and that doesn't allow it to happen.

#### **Capacity to take on the work as it emerged**

- Like today, the questions for this meeting, we didn't get the email until this afternoon. And so, I would have liked to have gotten that before today because sometimes I'm in different places and I know this meeting had to be scheduled. At first I want to put down to do it as early in the morning because my day gets hectic. As it goes on, it gets more complicated. Having that understand of flexibility like as soon as it's possible.
- And so when we do get information out, I do appreciate all the detail and all the steps, and everything is forthcoming. It's just all laid out, you do have to open it and look at it. And so there have been I know times when people haven't been able to or when some folks do have it up, you know you got one person that's in their car on their phone so they can't look at this, you know, look at all of that...and I think it's because we're all trying to do too much, we all want to get it

done, make it happen, and so we're all on this roller coaster ride. All together. And the expectations that we set for ourselves is to get more done faster. And sometimes we do have to slow down. And we do have to say this is enough, or this is how I was. If we don't finish this, it's okay

- we sometimes didn't have enough time to be able to do certain things. And when I say have enough time, I'm not saying in terms of meeting or anything like that. What I'm saying is, with the project that we have, there were times when we really started getting into it and because of our different work schedules. And because of different things we sometimes, some of us had to miss meetings and sometimes we had to back off.
- When the drawing board is completely, completely blank. But then you kind of have the concept of STEM, of research. It was just kind of working through all of the, probably what were the knowns, but not wanting to come in...and say, you need to do this, this, and this because the Science Museum's really intentional about saying we're not coming in here to dictate programming within a community. We want community to essentially dictate the programming.

#### **Finding shared time to meet and get work done**

- for the regional meetings, you know, if y'all know that you're gonna have so many people who do so many different things coming together, having maybe, if y'all can't make this regional meeting, having a second meeting or something like that for people, who could possibly make a different time to make a little bit more accessible .
- Scheduling in time,,,most people have full-time jobs and families and other commitments. Don't even throw in the pandemic in there as an added stressor. And sometimes it's been difficult to find times that work for everyone.
- the actual scheduling of these times. That process of trying to get everybody to respond to the time frame before things change on your schedule because my schedule changes day to day.
- the thing that I really love and appreciate about the Science Museum is their ability to allow the organic-ness of the process but at the same time that's also probably the most frustrating when we all are strapped on time.

#### **Group makeup - who is in the group and their ways of working**

- Our group, I suppose probably majority of us big picture thinkers and then there was probably one person that I'm thinking was probably the nuts and bolts person. And so I could see, but she's an amazing individual, and so she really worked through all of our thoughts, processes.

#### **Working virtually**

- definitely a little bit different with COVID and everything having to work with other individuals that you've never met through online. That's been kind of a challenge... that's probably the only hiccup that I've had, but I think being able to work over that challenge has allowed me to really see that even though we may not be working face to face or working together in person, that we can definitely get a lot done through online.

#### **Not too many concerns brought up and any were addressed quickly**

- I don't think we've had huge frustrations or concerns at all, but even the minor ones I think have been addressed fairly quickly.

#### **Group dynamics**

- Yeah, we've had with our regional team, we've had a lot of challenges along the way and David and Robbie have always been just real, real responsive and helping us to work through that and being able to do and support us and whatever. With whatever we've needed. I need help with technology and that was taken care of. And so that there was a willingness and an offer and then actually moving and pivoting with that. So that's been really, really good because we wouldn't be able to be where we are right now without that, helping assistance.
- probably the biggest frustrating thing, too, is that everybody's ideas become so big. And then

with the process being sort of intentionally not about telling you what to do, you gotta kind of work through your own, all that messy stuff, right? And so there were times where I just wanted, David tell us that what to do at times. And he would not tell us what to do but kind of coach us through that process, pull out the few ideas [and say to us] here's what I heard.

### **How did relationships within regional groups develop throughout this project? Between regional groups? Other kinds of relationships?**

#### **Pre-existing relationships**

- I knew all the other group members [in my region] and not only knew the other group members, like I had all the other group members' cell phone numbers in my cell phone. So, we were already connected. Actually all of us have even done programming together.
- It's kind of figuring out who you work well with and who you don't work well with, because I always work well with [RPGM name]. And I always work well with [RPGM name]. Just because I know them and I think we have a lot of similar beliefs when it comes to liberation of our people.

#### **New relationships and new partnerships beyond project**

- We've kind of formed almost like a family unit where we're able to kind of understand and connect with each other. Not just on the work we do but also the work that we do personally, individually outside of the project. And I think that has allowed me to build a good relationship.
- I definitely got to know [RPGM], you know, I call her sister girl now just because I rock with how she do things and how she move about things and we have conversations, even outside of the regional groups that I think we would have never had if we wasn't in this project together. We end up even doing another event together. I'm actually doing another event that I know she'll probably be a part of.... One of the biggest challenges to having that relationship outside of this is me and [RPGM name] are, you know, we have descendants of slavery in us, some type of history of that and some acknowledgment of that. And then [RPGM name] also has a little bit of that too, and I think [RPGM name] does as well, but that's where I feel like our relationships built even more is because we seen, okay, next couple of years what's gonna happen, how can we work together? And so I would say those regional relationships have been upkeep or restored because I wasn't really working with [RPGM name] before this...it's kind of harder to do that collaborative work, but I would definitely say that I'm happy to be a part of this project because I got to meet somebody like [RPGM name].
- It has been invaluable to get to know the other people in my group and I've already contacted them and done things with them outside of STEM. Just because we've got to know each other, use them as resources because they represent communities that I don't come from or don't have community with.
- Already the group is beyond what the Science Museum is trying to do here. We want to continue to work together, so that's been really powerful with our region.

#### **Positive collaborative working relationships among group members**

- Our group was really good about coming together and making some choices and making decisions. And we all took a part of the project.
- Within my cohort, we have all been able to develop those same relationships and trust, and if someone says something that is a little off or they didn't think the statement all the way through, we've checked each other and just been okay hold up, let's think about this in a different way and it just holds accountability through throughout the whole project.

#### **Value of the variety of people involved**

- When you mentioned the age, it definitely was something that was a great learning experience because sometimes certain definitions, me being younger, I have my own definition and someone in my group being a lot older, they have their own definition and kind of being able to

see where there's commonality and see where there's differences allows us to kind of see where there might be some miscommunication in the community about certain definitions or whatnot. And I think that's something that is valuable.

#### **More opportunities to get to know people across regional groups.**

- I would say that there hasn't been a great deal of relationship building across the regions. I still don't know who the people are.... and that's the tension with that time cap, right? Because they gave us one day for community building, and then, let's get to work.
- I wanted to make more relationships across the groups, just wasn't able. And so I hope that there's still, through the final share and all that stuff, that we can still build relationships because we just been so focused on our project in our group and...I really wish that I could have, but honestly, like about the time, I don't know where there would have been time, and then trying to organize those large group structures when you need to do information sharing, and then in a virtual world it was just difficult.
- There were a couple of opportunities. I think the first one that we had to get together, I can only be on for five minutes and it was just the time of the day in the day of the week...we're all trying to be in two or three places at one time, and then it sometimes was really difficult to be in two or three places at one time. So I would like to get to know folks and come together... I haven't been able to meet or interact with other folks more than that five minutes that I joined the first one.

#### **Foster relationship building across the regional groups during the projects, as well as ideas to stay connected after.**

- I think it would be awesome if we could meet a little bit more often as the three crews. I hear through David what you guys are all doing, and I see blips of photos or websites or creations of your project and I think it would be really awesome to check back in as the full group and kind of have maybe a mini group presentation to be like, this is what [name of region] is doing, this is what [name of region]'s doing. 'Cause I think that would then allow us to further develop those relationships throughout the different cohorts.
- Though it's nice to work in a smaller group, I think it would be also awesome to kind of work in a collaborative, a big group environment where maybe there might be something that we're like, my group is not entirely sure on how to tackle this problem. Well, somebody in your group might have that skill set to be able to do that, and I guess being able to balance ideas and connect with other resources outside of our group members.
- Maybe we could have more paired conversations even without an agenda. Just to get to know each other.
- I hope that we continue somehow to maintain some community within our groups. So that even if we need to just send an email to the listserv that that becomes, at least the possibility...It goes without saying that we need to stay connected and of all, like there was many people and too, when I was hearing about [RPGM], I was like, man I need to find out more about what [RPGM] does down there and get to know him more. Because one of the things up here is that there is small representation of black males and so I've tried to work, well, one of the things in this virtual world has brought some of these opportunities where you can connect with folks that are in the larger metropolitan area a lot more readily and so I want to stay connected.

#### **Trying to set up a collaboration across regions, but it didn't come to fruition because of busy schedules.**

- I tried to set up a collaboration between me, [RPGM name] and [RPGM name]...and we try to do a event and we was talking and stuff or whatever, but I think life just...people just kind of busy already. So a whole bunch of stuff already going on stuff that I just kind of let it be what it was,

but yeah it's just been a very busy time for me. So now I haven't worked with people outside of my group that I know right now.

#### **Learning from each other**

- When I heard that you're the [job title that includes diversity] up in [name of region], I'm like, okay, let's talk because what my organization does, we do very similar work.
- When all of the groups got together, I was looking at folks and saying, okay, which folks can I reach out to and connect with? Because there is so much that we can share across the spectrum. There's so many focus. I mean if you really think about it, when we talk about diversity, equity and inclusion, you can look at it from the standpoint, you can look at the law aspect, you can look at it from the social aspect. How does a sociology contribute to our biology and then how does that in turn bring us to a place where we act and develop these mindsets. And then we look at everything through those lenses. How does that develop? And then we can look at it from a medical standpoint talking about epigenetics, talking about the biology. What does it do to our bodies? So there are so many different aspects of DEI that presenting it and being able to come together helps us to say okay there's some other folks out there with some other ideas. Maybe the reason why I'm not connecting with everything is because maybe I'm stagnant in my own lane, you know what I'm saying? I haven't looked outside of my lane in order to see what someone else is doing so that now I can move. And that's what this project was able to do. I was able to reach out to other folks and say, okay, let's talk about it because there's some other things that we can do outside of this project that could help push DEI in a very different direction.

#### **What other insights did community members have to share?**

##### **Having a shared experience at the beginning**

- the group doing something before getting into this work is honestly vital, right? Because you kind of see how people interact, you see how people talk, you see where they coming from a little bit more when you get to know people, but when you just jump straight into this is kind of we all coming from our own perspective, and sometimes it could be really good, sometimes it could be really bad, not bad, but it could just be unhelpful to what we trying to accomplish. And so I definitely think that that would be vital,

##### **Having a shared experience at the end**

- if there was some type of oh we set up a dinner at Texas Roadhouse for y'all for finishing a project or whatever have you, stuff like that I think would be needed because it allows that reflection time and that ability to kind of make sure that this happens again.
- hopefully at the very end of the project we'll be able to do a collective thing.

##### **Who is the grant funder?**

- And I think one thing that I wish I had known was more about the grant dollars and who was funding this project? That was something I wish I had got a little bit more information on.

##### **What happens after "the end" of STEM RJ? Explore possibilities**

- I'd be interested to still being in contact with [RPGM name] and see what else the Science Museum is doing. And what else y'all got planned going on,
- I know that all the projects are supposed to be online...I think my question that I have is, how are they all gonna come together
- I wish that there were more opportunities to do things like this in other areas. So this is a, it's a good start, but it isn't something that we do enough of because I do think that for people who are in advocacy or DE&I in any kind of way, they work really extra hard in their communities and don't always know or have other people to support them who might be doing similar work. So, I think I'm excited about this and hope that that's something that can be continued in other

things...how amazing that could be replicated and multiplied, right?

**This project happened with a lot of other things going on around us and how that may impact decisions**

- did all of this during a very transitional time for me [with life changes]. We talked about, I have a lot of people pass away and then we had a lot of things going on in the cities at the same time. So it was a very interesting time. But people they rocked it though. They did what they did, what they could. So I'm always appreciative with that because honestly, it was a few meetings where I was like, we shouldn't even be having a meeting today, you know what I'm saying? Like, people should be taking this day off to breathe and to think and stuff like that.

**There were some missing voices from the project, especially young people**

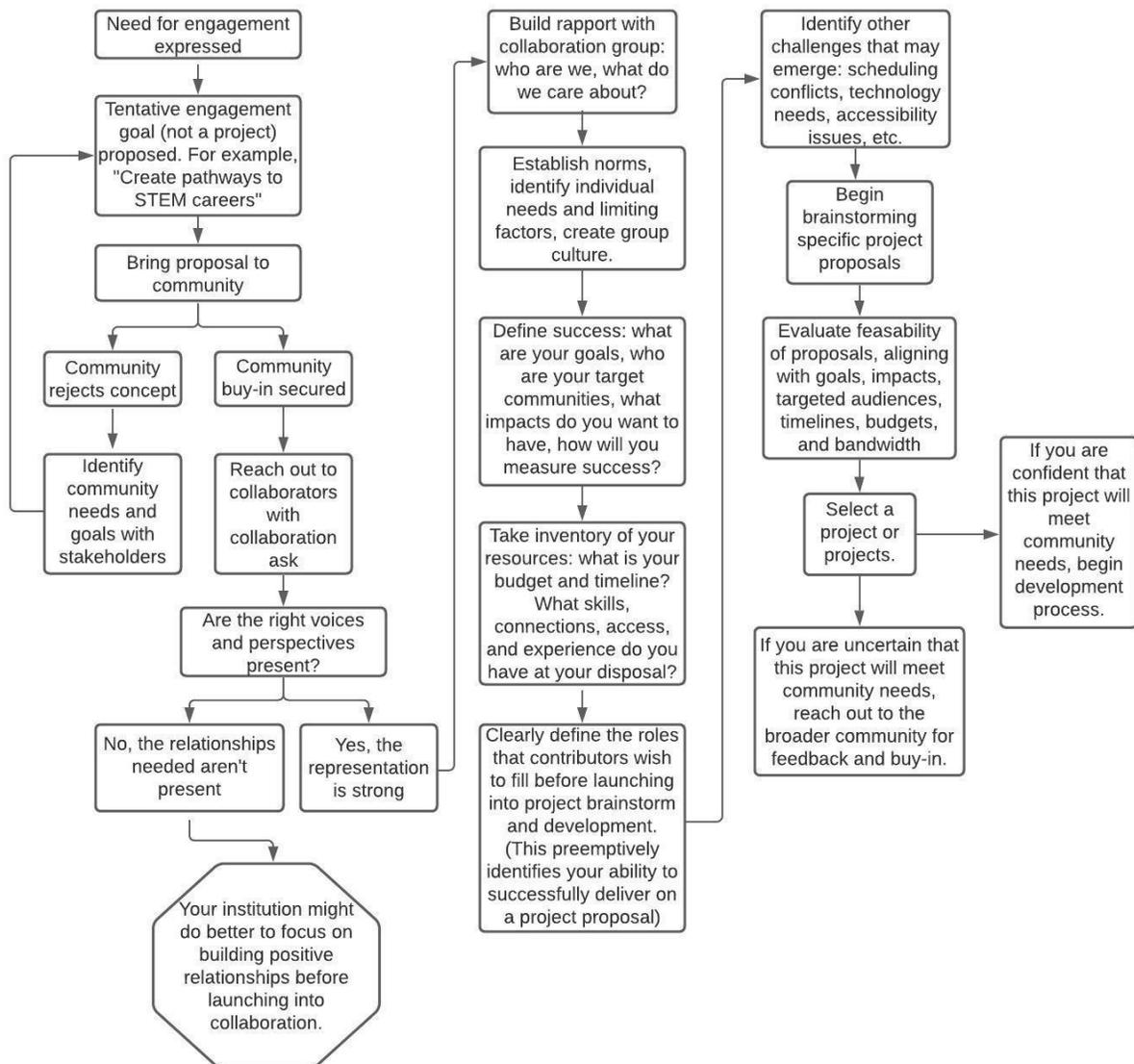
- I would like to see youth be a part of this process that we just went through. Young people be a part of this process, not just us as adults. I'd like it to be more intergenerational as we go through this model. Because I think they would have brought a really interesting lens to how to get the information out or what is important to get out and I think that was just the missing voice.

## Appendix C:

# Pre-Development Process for Genuine Collaboration: *Paired Conversations Insights*

### Background

The initial flow chart below detailing a pre-development process for genuine collaboration was developed by David Valentine and presented at the 2021 Collective Liberation Conference.



## Data From STEM RJ Paired Conversations

During paired conversations between community members involved in the STEM-RJ project, pairs were asked to share what makes them agree to collaborate with organizations. Their insights have been synthesized below and should inform an updated version of this flow chart. Direct quotes are in italics.

### NEED FOR ENGAGEMENT

- Before expressing a need for engagement, organizations should consider what they already have in place at an organizational level to support success. Community members shared examples of what they need to see, such as:
  - Something that guides the organization, like a theory of change or mission/vision statement
  - Commitment to pay people for their contributions
  - Willingness to jump in and do the hard work, big or small
  - Quotes
    - *“...having an organization being very clear on the impact that they're trying to make in the community and the work that they want to incorporate for a long term impact. I think that's something that creates a trustworthiness for me, that allows me to trust them and engage with them and give off my ideas and contribute to that.”*
- After expressing a need for engagement, organizations should consider who will be involved, both from within the organization and outside of it. Community members mentioned the importance of Representation, which includes:
  - Race/ethnicity
  - Age
  - Gender
  - Location
  - Role(s) in the organization
  - Relationships with the organization, its staff, and/or other community members
  - Quotes
    - *“Even though people be doing the right thing, but if you don't see representation...it's kind of hard to trust that organization because at the back of your mind, you always have that fear that you'll be treated differently. You'll not be treated as equal because there's no representation for you.... I'll be kicked out anytime...or someone else will come pick on me because I'm doing this.”*
    - *“I was really excited to see some familiar community leaders of color be in my cohort at least. I was excited to be able to work with people I've worked with before and know and trust that are community members of color who well represent their communities.”*
    - *“As an institution, the Science Museum itself is, I don't know if I would deem them trustworthy. But what I would say is, I've built relationships with the staff, and particularly the BIPOC staff at the Science Museum.”*

*And so I feel like the relationship is held through people, not the institution.”*

- *“I have a tendency to look at the historical perspective and see how the organization has pivoted and how they dealt with folks and the community...in times of trouble. So how does an organization respond?”*

## BUILD RAPPORT WITH COLLABORATION GROUP

- Once an organization has done the initial work to determine that it is ready to start collaborating with a community/communities, community members shared their own stories and examples of what community building looks like during this part of the process.
  - Inclusion/Belonging - Community members a/or their communities must believe that they are genuinely involved in what is happening. Being a welcoming and inclusive environment is in both action and words.
    - *“...it’s more of like do I feel like I belong, do I feel like I’m respected, my opinion and values are respected here, which I think also builds into that trust factor.”*
    - *“So I guess comfortability or sense of belonging in the project, like having a sense of you belong here, this is a space for you to do work. I would say that was built through actively always asking, what’s going on, how’s everything?”*
    - *“And since there was not so much structure, we were allowed to be flexible and use our networks and use our resources. So that created a sense of belonging.”*
    - *“But then also the breaking of the hierarchy. I think seeing David willing to not lead a meeting or saying all y’all can do what y’all feel is the right thing to do and different things of that sort, that allowed me to kind of have a sense of comfort or sense of belonging.”*
    - *“So, I would say I was, I felt that I was respected and that I was, I was appreciated in that when there were challenges or different things and that so we were able to have those conversations and not fret away from them. And I think that over time, definitely gave me that sense of belonging.”*
  - Vulnerability - There has to be room for people to come together in ways that safely honor who they are and what they know.
    - *“...when you are bringing a group of people together, one of the things that I touch on especially is being able to share space. And if you know how to share space, well there’s going to be some learning involved and there’s going to be some great business, going to be some great ideas that are going to be shared.”And I know that we all have biases, but then I’ve watched for prejudice and can we talk through any of it?*
    - *“...comfort with discomfort’...matters a lot. Your ability to answer a difficult question or have a difficult question posed to you....And I think the*

*answers you get from hard questions are what lead me to trust or to not trust people.”*

#### EVALUATE FEASIBILITY OF PROJECTS

- One community member shared a story that illustrates pitfalls that can impede collaboration. Before selecting a project, particular time and attention should be focused on strategies that will avoid issues like what is called out in this story that can block progress and erode trust. The work that is ongoing needs to be continuously nurtured and it is important that efforts are not taken for granted.
  - *“I have power and control in what the outcome is and what the process looks like. And so I agreed to this because I felt like I have a say and if that's not where we're headed, that they're gonna steer off that course. Now, if I did not have trust in that, I would probably not have participated because I think one of the things through their work with diversity, equity inclusion, we run the risk of giving them legitimacy because we're participating in this. And so I would hate to think that I give them legitimacy and then they came up with a product that does not reflect what our experience, as our community members working with them is, but I believe because of the people that I work with in this space that that is not an issue.”*

## Appendix D:

### What makes an organization trustworthy?

From paired conversations with community members, the following statements about how trust happens in collaborations with organizations emerged.

1. Trust is not a given.
2. Trust does not happen right away.
3. Trust is built over time.
4. Trust is connected to lived experiences.
5. Trust is attached to an organization's actions.

1, 2, 3

- *I feel like the trust has to be over time.*
- *I think to build trust with somebody is like a four-year process, at least in the understanding of trust that I have.*
- *It would be too soon to talk about trust because trust, I feel it's for things like if I'm gonna be walking the streets with you, then we developing a plan that needs to dismantle systems, that's where trust really comes into play.*
- *I get to work with community organizations that are already involved in this work. So, like, the [name of community program] or the [name of organization] in town. They're already deeply engaged in meaningful work. So I don't think I've had to build that trust with them because I'm already advocating for their communities so it's been easy in that way. Yeah.*
- *...have you been around enough to demonstrate that you're in this for the long haul? And that you're going to continue to show up and when cameras and everything else is away?*

4

- *"As an institution, the Science Museum itself is, I don't know if I would deem them trustworthy. But what I would say is, I've built relationships with the staff, and particularly the BIPOC staff at the Science Museum. And so I feel like the relationship is held through people, not the institution."*

5

- *"Organizations that have a high turnover rate, organizations who don't, I tend not to work with organizations, or just be kind of wary of [those kinds of] organizations."*
- *"And I would say, because of that [SMM programming] and being a part of it, and realizing how much time and focus they have placed on understanding the history of race in this country and then making it into a meaningful experience, maybe there was a little bit of trust built that way? Because you're right, historically there hasn't been a lot of trust between the BIPOC community and science specifically museums because they've told stories that weren't necessarily true or accurate or reflective of BIPOC communities. As I think about Native and Indigenous people, that has not been true. But I think I saw a shift when I went through that [SMM programming] in that mindset. Now I can't say it*

*represents the entire Museum, but at least to the folks, though, that were involved with that [SMM programming].”*

## Appendix E:

# Fargo/Moorhead Partners Working for BIPOC Youth Empowerment: the creation of H.O.M.I.E.S

### **The Fargo/Moorhead context for racial justice work**

The Fargo/Moorhead STEM RJ group identified specific issues among local BIPOC communities that they wanted to consider and possibly address. They looked in particular at how Native and Black youth experience education, and the disparities in outcomes (for instance, overrepresentation in special education and low representation in gifted programs) for these groups. They discussed the local homeless population, many of whom are people of color, and particularly identified the ways that the pandemic was reducing care for this community.

The group also explored the differences and similarities between the experiences of new American communities (immigrants) and other BIPOC communities. While both groups experience isolation, lack of representation, lack of peers, and lack of mentors, the overall lack of resources (including resources shutting down) led at times to a scarcity approach and a tug of war between these two communities instead of the groups uniting to advocate together for resources.

### **Making a plan**

The group developed a program called HOMIES to provide youth leadership training in their local community. The program centered on personal branding, mental health, envisioning one's future, nonviolent communication, and determination. The group polled local community members and leaders to determine what to do and followed the expressed needs of their community.

The seven youth who participated in the training program responded very positively to their experience. Their end-of-experience ratings show that the experience was engaging, and that the youth gained confidence in their ability to achieve the goals of the training. Already, one youth who participated in the program has reported that they want to replicate this training for others in their community.

### **Ideas for future work**

This group articulated (and asked community members about their interest?) two other ideas that hold promise as well.

- An Art Gallery style experience about what it's like to be a person of color in the educational system, including images, poems, stand-up comedy, and other formats contributed by faculty, staff, and students. This would be centered around real experiences, not experiences through a particular (positive or negative) spin.

- A Chutes and Ladders style game that would show the different experiences for BIPOC and white community members through different chutes and ladders for different groups. The chutes in particular would affect people of color, reflective of how US society is systematically racist and prioritizes white success and POC failure and marginalization.

### **Long-term vision for Fargo/Moorhead**

This group is focused on creating a new reality for BIPOC youth, no matter the community (new American or long-time resident) they come from. This new reality would include solidarity in the group, a feeling of belonging and connectedness, active mentorship and support from older community members, and ongoing honest conversations about the internal struggle of operating in white-dominated communities.

### **Team Members**

The Fargo/Moorhead team members throughout the project were: Vynetta Morrow, Jered Pigeon, Fred Edwards, Amena Chaudhry, and Ntwali A Cyusa.

# Twin Cities Partners Discuss Pathways to Change: the Creation of an Activism and Racial Justice Podcast

## **The Twin Cities Context for racial justice work**

This group began work in early fall, while the unrest and uprisings around racial justice resulting from George Floyd's murder were recent and ongoing. The members of the group are activists, but in different areas of work, and initial conversation focused on their involvement, how they had been affected, and how they were making sense of the current context. Learning about all these strands of work was a powerful experience for team members.

The group talked about two groups in particular depth (both groups are ones that team members brought personal experience to the table). Formerly incarcerated people were one focus, and their technology needs, both for hardware and for knowledge and comfort in a world that is changing rapidly with respect to the role that technology plays in everyday life and in professional settings.

Youth, particularly Black and Native youth, was the other group of focus. The group was generally focused on educational and career outcomes for this group, and interested in how to prepare them for STEM careers. Locally, Native youth are the most likely to drop out of school and this was a point of ongoing discussion. The Twin Cities group worked to describe a future where youth of color are given resources to be innovators, not just end users, of scientific advancement.

## **Making a plan**

The power of learning about each others' activism work and seeing how it complemented varied efforts was real. The group decided to create a limited-run podcast that described the details of the activist scene and current issues in the Twin Cities, related to racial justice and STEM. The group decided to include youth voices as possible to make sure to connect with and center this key group.

This format allowed the team to highlight their own experiences, strengths, and interests, as different voices took center stage, which in turn allowed the audience different entry points to understanding activism and racial justice in the Twin Cities. It also allows for ongoing use over coming months and beyond.

An opening event with podcast guests, which included guided questions and audience Q&A, further highlighted the work and invited more people to listen and participate.

The group continues to imagine ways that this product can be used: new settings, sharing through formal and informal networks, and more.

### **Ideas for future work**

This group generated multiple additional ideas that they felt show promise for racial justice in the Twin Cities community:

- First, a guide on how to engage in protests, which would be aimed at youth wanting to engage in their community, specifically in the Twin Cities, and with a focus on police brutality. This would cover topics like safety, rest, and tactics, as well as other pertinent issues.
- Second, a job resource program, and online resource (specifically in response to the pandemic setting) to provide insights into certain careers, and the ins and outs of a job. Virtual tours of STEM works places were of particular interest here.
- Finally, a job resource program focused specifically on the Science Museum of Minnesota, including the forward facing and back of house jobs that are involved in a science museums setting, and a virtual tour of the museum.

### **Long-term vision for the Twin Cities**

This group discussed a more empowered and connected community, with the seemingly disparate forms of activism working together more holistically. This might include collaboration, cross-marketing, and more, leading long term to a more effective activist community that can make change together. Easier on-ramps (through access to information for those who are interested in joining the activist community) is also key to this future.

### **Team Members**

The Twin Cities team members throughout this project were: Angel Swann, Marika Pfefferkorn, Russ Balenger, Sarah Zalanga, and Vanessa Young.

# Rochester Partners Working for Racial Justice: the creation of *Not So Trivial Pursuit*

A project supported by the National Science Foundation EHR#2041924

## **The Rochester context for racial justice work**

The Rochester STEM RJ group focused together on the ways that racial justice intersects with the educational system in their area, more specifically higher education. They identified that first generation university students of color were not provided resources to thrive (by K-12, by colleges), and that educators in those settings also were not given the resources they likely needed to engage with first generation students of color and help them thrive. The group also identified that these students' families needed resources that weren't easily accessible. One key aspect that recurred repeatedly is the language access that may not be provided for students or their families.

Though this started and remained a primary focus for this group, they also discussed other topics that are of concern in Rochester, or are otherwise part of considering what racial justice means in Rochester. Disparities and health and health outcomes, lack of representation from BIPOC professionals in the STEM, health, and other fields, and other topics were on the table. This group particularly focused on how highlighting achievements by people of color could upset preconceived notions.

This group took a wide view, but stayed attentive to immigrant populations and to educational systems, and frequently referenced their own identities as students, educators, and immigrants, as they centered their work in their own community and their own experiences.

## **Making a plan**

This group worked to develop an easily accessed, fun way to educate players on the histories at the intersection of STEM and Racial Justice. They built a board game called "Not So Trivial Pursuit" and are working to create an online way to play that board game.

The group thought deeply about the format and about the content of their game. They wanted what they made to be available long-term, and to be update-able so that it stays relevant (hence the online format). They wanted it to work in different cultural groups and across cultures, and to be particularly accessible to the communities that it is representing. They wanted the resources to be able to work in, and apply to, both personal and professional settings. They incorporated strategies that would help defy or upset stereotypes that players might hold. In creating the resource, they relied on research from others and on community expertise to create a well-rounded experience that they hoped many would enjoy.

Their learning goals for those who play the game are:

- Learning hidden histories (specific to underrepresented groups)
- Growth in cultural fluency
- An increased understanding of diversity and inclusion language
- Improved ability to communicate with one another around cultural issues
- An improved understanding of how to be a better ally
- For learners to have fun!

### **Ideas for future work**

One idea that the group articulated but chose not to pursue for now was a pathways activity that would allow students to explore choices ahead of them in ways that would demonstrate the varied paths it would take to get to a desired career. The activity would be structured, and students would work with and connect to mentors currently in those careers. Students would understand how their mentors arrived at those careers, and would have a broad “day in the life” overview of how the mentor spends their time.

### **Long-term vision for Rochester**

The group’s long term vision for their community is one that has an improved ability to discuss and confront conversations about race, a sense of community and togetherness for people in their community and around the world who are minoritized, and one in which people of color see themselves represented and destigmatized. In such a world, the specific immediate issues they focused on, of differential educational experiences and outcomes, health experiences and outcomes, and more, will have diminished and then disappeared.

### **Team members**

The Rochester team members throughout this project were: Charly Vang, Karimatu Jalloh, Leticia Flores, Chao Mwatela, and Coach Rob.