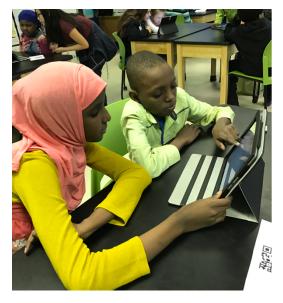# A Rightful Presence STEM

A Justice-oriented approach to understanding how youth seek to engage in STEM in meaningful and culturally sustaining ways.

The Challenge: Who has a place in STEM?

Engaging in STEM is deeply grounded in people's experiences in the world, including their families and communities' cultural practices. Students from historically non-dominant communities have powerful cultural knowledge and experience that are highly relevant to engaging with STEM. Yet, for many students, engaging in STEM can be constrained and limited. *The dominant discourse and practice of STEM reflect white, western and masculine ways of knowing and doing science.* The way that STEM is often taught and how students are expected to learn further projects these dominant cultural norms. Consequently not all students are encouraged or supported in leveraging *their* powerful cultural expertise towards meaningful learning or engagement in STEM. We can think about this as denying students a **Rightful Presence** in science learning.

"Teachers care, but they do not care about the community all of the time. We go outside on our time, and find places where we can go do science or engineering for our communities. School doesn't know how to do that. School doesn't know that we do that. We need to tell our teachers how we do it. We got to help them. . ."

A New Approach: Rightful Presence

Rightful presence in a classroom community has two interconnected parts.

- Individuals are welcomed as a legitimate, contributing, and fully human member of a learning community because of who one is, and not who one should be.
- The community works to more fully value the cultural knowledge and practices of newcomers, while seeking to disrupt powered-dynamics that inhibit such efforts.

The idea of rightful presence emerges from critical justice studies of borderland and refugee communities in welcoming host countries. Most host countries have legislation in place which describe and formalize the rights (or lack thereof) of immigrants and refugees. These are "institutional rights." However, how such rights are enacted in-

practice do not always or fully account for the injustices individuals experiences in place or time. A place can legislate access to public commons and services, but atmospheric walls (immaterial walls with material effects) of whiteness, masculinity, and class privilege can, in-practice, mediate access. While being welcomed as guests in a new world provides forms of access and opportunity otherwise unavailable to immigrants and refugees, it also sets up power dynamics.

Add something here to frame the reflection questions.

Should we add a third page for a vignette?

How are students welcomed as a legitimate, contributing, and fully human member of a learning community because of who one is, and not who one should be?

1. What forms of student knowledge and practices are valued in your classroom as a part of science learning, science practice? When are these forms of knowledge and practice most valued?

2. When are students' cultural knowledge and practices less visible, less human, or less welcomed in your classroom? How and why?

What classroom practices disrupting oppressive power dynamics & re-structuring toward humanizing opportunities?

3. What norms, talk and practices used in the learning environment work towards welcoming students for who they are through valuing and leveraging their knowledge, practices and experiences in the world?

4. Do these norms, talk and practices actively disrupt and restructure normative power relations in the local practice towards more equitable and consequential ends along racial, gender and class hierarchies and the intersections of these hierarchies with stances on valued knowledge and practice?

5. What tangible symbols of rightful presence emerge when normative power relations are disrupted in the learning community?

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