Supporting Sensemaking Through Diverse Student Perspectives and Experiences

Module Design:

- This module is designed to build the capacity of teachers in identifying the range of intellectual resources students use as they make sense of phenomena. Participants will first explore how equity and justice relate to culture-based approaches to pedagogy. The focus will then switch on how to identify and leverage the resources students use in moments of sensemaking.
- This module is divided into three sessions. Each session builds upon one another to provide a scaffolding in understanding and identifying phenomena.
- Module facilitators might be a department chair, teacher leader or curriculum specialist, etc. With that in mind, the facilitator notes include content information and potential talking points intended to provide support to a facilitator who does not have extensive mathematics experience.
- Pre-service teacher faculty may wish to utilize this module to have deeper discussions about student sense-making.
- This resource may also be used by those wanting to learn how equity involves promoting the rightful presence of all students across scales of justice, desettling inequities and supporting expansive learning pathways.

Goals of this Module

- Explore equity dimensions of sense-making through the science and engineering practices.
- Learn to see different ways students contribute to making sense of phenomena and connect to science.
- Better appreciate that navigating multiple ways of knowing is the basic human condition, not the exception (Bang, 2018).
- Make a commitment to shape instruction that supports diverse sense-making.

Session A: Equity in Science

- Participants explore their beliefs about educational inequity in science.
- Participants explore how students use culture and experiences as they make meaning of science concepts

Session B: The Principles for Equitable Science Education

- Participants will explore the principles for equitable science education
- Participants will investigate the role of student discourse in equitable science education.

Session C: Leverage Expertise from All Students

- Participants will identify the assets students use when making meaning by analyzing various cultural scenarios.

- Participants will end this module by developing a plan in making science education equitable for all students.

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