



**Building on Instructional Practice:
Focus on Equity
Participant Handbook**

Participant Name: _____

SEAD Themes

Definitions taken from National Council of Teachers of Mathematics (NCTM), with equity additions from CASEL (November 2018).

<p>AGENCY</p>	<ul style="list-style-type: none"> • NCTM: The presentation of one’s identity to oneself and to others, combining identity (who we are) with what we can do (agency). Agency is evident in a student’s self-awareness and self-management, and his/her sense of confidence and knowledge about academic work. • CASEL further describes the characteristic of agency in mathematics: <ul style="list-style-type: none"> • Cultural competence: a historically grounded, strengths-focused facility with the relational skills that are valued in the students’ culture of origin. • Cultural fluency which refers to the capacity to effectively learn about and negotiate cultural differences.
<p>BELONGING</p>	<ul style="list-style-type: none"> • “Belonging is a sense of fitting in or feeling like you are an important member of a group.” (vocabulary.com) • “To be a member of (a club, organization, etc.)” (<i>Merriam Webster Learner’s Dictionary</i>) • CASEL further describes the characteristic of belonging in mathematics: <ul style="list-style-type: none"> • Examine what it means to belong to a group or community, including how ethnicity and race impacts one’s sense of self and beliefs. (A healthy sense of ethnic-racial identity is important for psychological, academic, and social well-being.) • Engage in initiatives and co-create solutions that are inclusive, equitable, and mutually supportive.
<p>DISCOURSE</p>	<ul style="list-style-type: none"> • NCTM: Discourse includes ways of representing, thinking, talking, agreeing, and disagreeing—the way ideas are exchanged and what the ideas entail; and as being shaped by the tasks in which students engage as well as by the nature of the learning. • CASEL further describes the characteristic of discourse in mathematics: <ul style="list-style-type: none"> • Encouraging student academic talk in mathematics instruction. • Increasing student talk time so that it is balanced with or exceeds teacher talk within lessons. • Creating opportunities for students to understand the viewpoints of others, including both/multiple sides of an issue.
<p>IDENTITY</p>	<ul style="list-style-type: none"> • NCTM: The dispositions and deeply held beliefs that students develop about their ability to participate and perform effectively in mathematical contexts, and their ability to use mathematics in powerful ways across the contexts of their lives. • CASEL further describes the characteristic of identity in mathematics: <ul style="list-style-type: none"> • Understand the links between personal and sociocultural identities that are defined by cultural and/or family values, ethnicity, race, socioeconomic status, gender, and other factors. • Ground oneself in and affirm one’s cultural heritage(s) or communities (This can be especially important for students of color, and reduce psychological distress and risky behaviors, protect against the negative health impacts of racial discrimination, and promote a range of positive social and emotional outcomes, including school engagement and prosocial behaviors.)

Find SEAD Theme Guidebooks included in the Stride 3 toolkit.



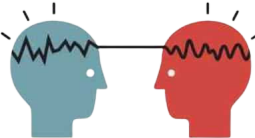
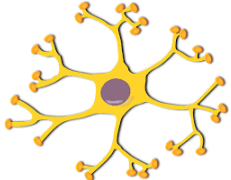
Source Information can be downloaded in its entirety at www.equitablemath.org.


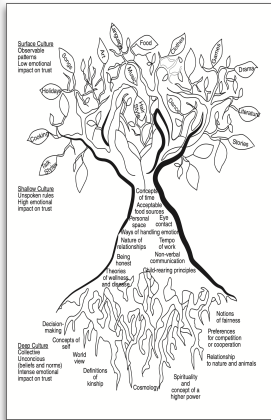
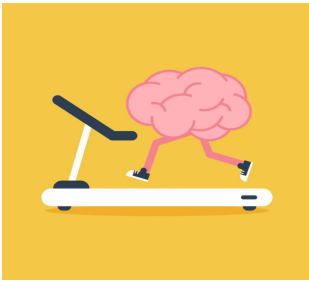
Three Facts and A Hashtag

As your team jigsaws the information card about your assigned brain structure:

- Synthesize the information into 3 facts you definitely want to share with the whole group. Write these down in the right-hand column for your structure.
- Create a “hashtag” that will help everyone remember why your structure is important for learning. (i.e. #keepcalmandthinkon)

During team presentations, write down your biggest takeaways from each presentation in the right-hand column of each structure.

Brain Structure	Facts & Takeaways
<p>Structure:</p>  <p>Hashtag:</p>	
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DOES IT NEED MORE ORANGE JUICE?

Multiple Representations of Proportions

If you added 4 cups of red paint to 6 cups of blue paint and mixed it well, do you think the color would differ from a mixture of 12 cups of red paint and 18 cups of blue paint? Or would they be the same shade of purple? How could you be certain? If you mixed 3 cups of orange juice with 2 cups of pineapple juice would it taste the same as if you mixed 7 cups of orange juice with 5 cups of pineapple juice? Would one taste more “orangey”? Could you prove it? Today you will investigate these types of questions mathematically. Can you take the guesswork—or color/taste preference—out of this?

2-29.

Astrida loves hosting parties with a tropical theme. Everyone in her neighborhood remembers the tropical themed party from five years ago when she roasted a whole pig in the ground and first introduced her favorite tropical drink. Astrida mixes orange juice with pineapple juice to create what she calls Pure Paradise Perfection!

The first couple of years, Astrida had to do a lot of guessing to get her Pure Paradise Perfection drink just right. One year she mixed 3 quarts of orange juice with 4 quarts of pineapple juice. The year after, expecting more people, Astrida mixed 4 quarts of orange juice with 5 quarts of pineapple juice. It was clear to Astrida that the two batches tasted different.

Next year she is expecting even more people to attend her tropical themed party, so she will need to make even more Pure Paradise Perfection. She wants to make approximately 45 quarts of Pure Paradise Perfection that will be more “pineappley” than “orangey.” Which recipe should she follow: 3 quarts of orange juice with 4 quarts of pineapple juice, 4 quarts of orange juice with 5 quarts of pineapple juice, or does it not really matter? And, once she decides on a recipe, how much of each flavor of juice will she need?



- Once you have made your decision, you will need to justify it mathematically. Obtain a Lesson 2.9B Resource Page. Each team member will complete one section and share it with the team. Be prepared to share your conclusion with the class.
- Write a letter to Astrida advising her on which recipe she should make, how much of each flavor of juice she will need, and why this recipe is the best for her next tropical themed party.





Lesson Plan

Standard(s):

Materials Prep:

Pre-Planning Reflection Questions:

- Did I work all the problems, including the Review & Preview?
- What mathematics is being learned?
- How does it relate to what has already been learned?
- Where are these mathematical ideas going?

<p>Mathematical Goal of the lesson: <i>What do I expect my students to be able to do or know by the end of this lesson?</i></p> <p>Core Problems: <i>Are there particular core problems that would support my goal?</i></p>	E X P L O R E	<p>Study Team & Teaching Strategies and Reading Strategies: <i>List problem # with strategy</i></p>
<p>Pocket Questions to ask as I circulate: <i>Is there a question I could ask to see how my students are thinking about the Math goal?</i></p>		<p>Team Roles – Who is Doing What: <i>How can I use roles to improve my class management and make the math accessible to all students?</i></p>
<p>LESSON LAUNCH: <i>Which part of the existing lesson can be used to launch? How? Who (students/teacher) is doing what?</i></p>		<p>Formative Assessment Plan: <i>What STTS will I use when some of my students have not attained the math goal?</i></p> <p>CLOSURE (time needed): <i>How can I get my students to reflect on the Math goal?</i></p> <p>Review & Preview Problems:</p>

REFLECTION AFTER THE LESSON

Students

In what ways did my students formally assess their understanding of the lesson goal?

In what ways did my students take ownership of expectations for learning?

In what ways did my students engage all team members in math discourse?

In what ways did my students flexibly use multiple representations and strategies to justify their solutions?

Teacher

In what ways did I make the lesson goal transparent to all students?

In what ways were my students held accountable as individuals and as team members?

In what ways did I support and maintain the cognitive demands of the lesson?

In what ways did I use strategies and questioning to support effective collaborative teams?

Formative & Summative Assessment Notes



Establishing Alliance in the Learning Partnership

Role:	Notes:
<p>Resource Manager -</p> <ol style="list-style-type: none">1. Why Marginalized Dependent Learners Need an Ally2. Validating Students' Experiences	
<p>Recorder/Reporter -</p> <ol style="list-style-type: none">3. What is an Alliance4. Features of the Learning Partnership Alliance	



CPM CPM EDUCATIONAL PROGRAM

<p>Task Manager -</p> <p>5. Creating the Pact</p> <p>6. Giving Dependent Learners the Basic Tools for Independent Learning</p>	
<p>Facilitator -</p> <p>7. The Power of Feedback to Improve Learning</p> <p>8. Making Feedback Culturally responsive: Giving “Wise” Feedback</p>	