

A Pathway to Equitable Math Instruction

Sustaining Equitable Practice

Coaching structures that support
math educators in their ongoing
centering of equity principles

STRIDE

5



Sustaining Equitable Practice

This tool is a framework designed to support instructional coaches, administrators, or lead teachers who are seeking guidance on an approach to coaching that addresses equity issues in the math classroom. It focuses on developing cultural competence, emotional intelligence of both teachers and students, and the knowledge and skill-building of teaching. This guide and its categories are inspired by Zaretta Hammond’s book *Culturally Responsive Teaching and the Brain*, as well as Elena Aguilar’s article “Mind the Gap.” By interweaving these two frameworks, and directing coaches to the resources that support the intersections of these ideas, we offer multiple pathways so that educators can embrace math equity professional coaching in a way that best meets their needs, in alignment to the appropriate area for teacher development and/or department or school-wide goals.

HOW TO USE THIS TOOL

This guide can be considered a curated “choose your own adventure” launching point for the work of coaching for math equity. To use this framework, a coach, alongside their teacher, conducts a personal pre-assessment and interest checklist to select the category on which to focus. The three categories of this framework are **Building Awareness**, **Building Learning Partnerships**, and **Building Intellectual Capacity**. Each category has three

columns, which could roughly be thought of as steps. Coaches and teachers then use Guiding Questions within the three categories provided to determine focus areas for coaching. It is often the case that to explore a category fully, it makes sense to work through the framework’s columns from left to right: Learn, Practice, and Consider.

THEMES

Teacher Support

GUIDING PRINCIPLES

Equitable access to grade-level priority math standards.

Targeted curricula and practices designed to create equitable access to math instruction for students gaining English proficiency.

Culturally relevant curricula and practices designed to increase access for students of color and students learning English.

Considerations for math instruction for blended learning environments.

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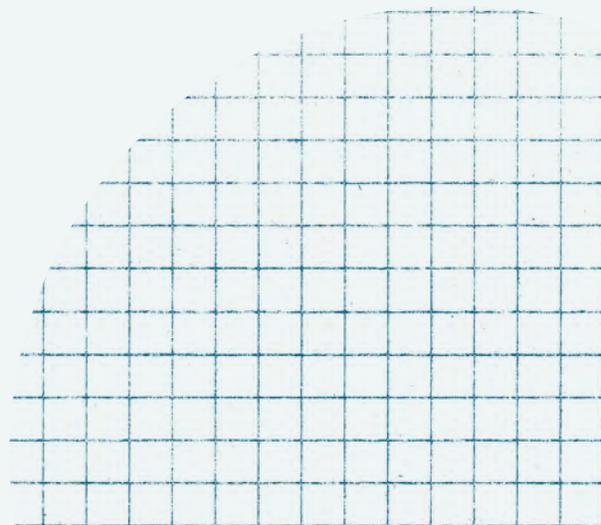


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Coaching Structures for Math Equity

“Education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity or it becomes the practice of freedom, the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world.”

— Paulo Freire, *Pedagogy of the Oppressed*

Introduction

Instructional leaders are at various stages of readiness to engage in working towards math equity. This guide is designed to support instructional coaches, administrators, or lead teachers who are seeking guidance on an approach to coaching in a way that addresses issues of equity in the math classroom. This guide focuses on developing cultural competence, emotional intelligence in both teachers and students, and the knowledge and skill-building of teaching. The exploration of these particular categories was inspired by Elena Aguilar’s “Mind the Gap,” a framework which avers that the key to working with adult learners is to first identify the area where there is room for growth, and then to be intentional in addressing those areas. This tool presents the opportunity for coaches and teachers to choose the direction for math equity coaching that is most closely aligned to the appropriate area for teacher development and/or department- or school-wide goals. This tool is also inspired by Zaretta Hammond’s book, *Culturally Responsive Teaching and the Brain*. The categories of coaching actions are loosely guided by the sections of Hammond’s book. By interweaving these two frameworks, and directing coaches to the resources that support the intersections of ideas, we offer choice and multiple pathways so that educators can embrace math equity professional coaching in a way that best meets their needs. Meanwhile, this tool is not exhaustive and can therefore be thought of as a starting point for the work of coaching for math equity.

What is Coaching for Equity?

Before embarking on the use of this tool, it is important to clarify what coaching for equity is—and what it is not. Coaching for equity is focused on transforming mathematics education. The COVID-19 pandemic and subsequent disruptions to schooling have laid bare pre-existing inequities and systemic barriers to ensuring that every student has a meaningful opportunity to excel in mathematics. Inequitable opportunities and outcomes have been particularly apparent for students gaining English proficiency and BIPOC students. Consequently, coaching for math equity focuses on building and sustaining a lasting framework to prioritize antiracist mathematics, the meaning of which is explained by TODOS in **“The Mo(ve)ment to Prioritize Antiracist Mathematics.”** Although coaching for equity supports growth for the coaches who work with teachers as well as the teachers who educate students, the primary beneficiaries of this approach are the students. Moving gradually from left to right on the following table will highlight the intentions of coaching for equity.

WHAT COACHING FOR EQUITY IS NOT	WHAT COACHING FOR EQUITY SHOULD BE
Increasing test scores or ensuring district compliance.	Focused on the whole child and authentic measurement of student growth.
Instructional coach as the expert.	Collaborative, cognitive, and dialogical.
Focused on classroom management or student compliance.	Focused on building learning partnerships.
Surface actions: pretty pictures and math word problems that include ethnic names.	Recognizing and honoring students positionality and assets.
Quick professional development to learn tricks of the trade.	Deep, evolving, and ongoing work.
Simplifying and/or over-scaffolding.	Conceptually rigorous.
Colorblind or conflict-averse.	Courageous conversations.

Who Will Use This Tool?

This framework is primarily designed for instructional coaches who are working with math teachers in individual or small-group coaching. The resources and guidance can be adapted for larger group settings like professional development. While this framework is designed with instructional coaches and teacher leaders in mind, administrators or district partners who are seeking tools to support math equity work for teachers may find this tool supports their needs and priorities.

> Consult the [Coach Interest Checklist](#) to determine whether this tool is the right fit for your needs, and to narrow the lens from which you will be engaged in this work.

Tool Alignment

Our tool is aligned and organized along the three sections of Zaretta Hammond's book *Culturally Responsive Teaching and the Brain*. These three sections are Building Awareness, Building Learning Partnerships, and Building Intellectual Capacity. Our tool is then cross-aligned with four elements of Elena Aguilar's "Mind the Gap" framework: Knowledge, Skills, and Emotional Intelligence as components of Cultural Competence. The tool uses the crosswalk of Hammond's and Aguilar's frameworks to integrate key elements of the [CASEL Framework](#), the [Common Core Standards for Mathematical Practice](#), and the principles of the [California English Learner Roadmap](#).

To build coherent alignment with the other tools in this EdTrust West toolkit, four individual teacher-facing tools are linked as possible activities for the coach to complete with their teacher. We then provide links to outside readings, which serve as additional resources to fill in any gaps or offer opportunities for augmentation. Due to the various points of alignment with core frameworks for teaching diverse learners, readers should be able to find multiple lenses or points for entry in the tool.

Guiding Principles Overview

PRINCIPLE 1.

Prior to any instructional coaching, the leader takes stock of their own identity.

PRINCIPLE 2.

The relationship between an instructional coach and teacher can be complicated and nuanced given the intersectionality of both participants' identities.

PRINCIPLE 3.

To coach for math equity, an instructional leader must establish and continue to grow comfortable with having conversations that may feel uncomfortable and even embarrassing, and these conversations that may induce strong emotions from both parties.

PRINCIPLE 4.

Provide structured time and opportunities for teachers to implement their knowledge of student-centered, equitable math practices that support language development.

COACHING TOOL STRUCTURE AND GUIDANCE

PRINCIPLE 1

COACH

Examine one's positionality and context as a coach.



PRINCIPLE 2

COACH

Examine the relationship, status, and experience levels of coach and coachee.



PRINCIPLE 3

TEACHER WITH SUPPORT OF COACH

Engage in self-examination of teaching mathematics with an equity lens.



PRINCIPLE 3

TEACHER WITH SUPPORT OF COACH

Identify growth areas as illuminated by the self-examination.



PRINCIPLE 3

COACH

Select and suggest resources for study of and support for implementation of practice.



PRINCIPLE 4

COACH AND TEACHER

Participate in Math Equity Coaching & Growth Cycle to interrogate a topic and/or implement a shift in instructional practice.

PRINCIPLE 4

COACH, TEACHER, AND COLLEAGUES

Participate in Instructional Acceleration Days to examine, practice, and critique delivery of instruction.

PRINCIPLE 1**Prior to any instructional coaching, the leader takes stock of their own identity.**

Prior to embarking on an instructional coaching relationship with a colleague, it is imperative that a coach, administrator, or lead teacher first examine their own identity before asking teachers to do the same. This examination should address one's underlying inherently racist beliefs and biases, positionality, and personal power within that positionality. The role of coach requires continuous study and personal growth in order to support the same in others, so resting upon the laurels of prior learning is not sufficient. Instead, each new relationship as a coach should begin with a re-examination of one's own beliefs, along with a sharpening of the coach's understanding of the nuanced stance upon which one will support another.

Festinger's 1957 theory of cognitive dissonance, as summarized in the book Cognitive Dissonance: Reexamining a Pivotal Theory in Psychology Second Edition, rings true:

"The existence of dissonance, being psychologically uncomfortable, motivates the person to reduce the dissonance and leads to avoidance of information likely to increase the dissonance. The greater the magnitude of the dissonance, the greater the pressure to reduce dissonance."

- > To guide in taking stock of one's own identity and positionality, take the Coach Interest Checklist and a Coach Pre-Assessment to build context for the work.

PRINCIPLE 2

The relationship between instructional coach and teacher can be complicated and nuanced given the intersectionality of both participants' identities.

Since the relationship between instructional coach and teacher can be complicated and nuanced, taking stock of the positionality of all participants is the foundation to a respectful and productive coaching relationship. A deliberate coaching practice must honor a teacher's prior experience by affirming where teachers are starting from in their lives and careers, as well as respect their prior development in teaching for math equity. We acknowledge that there are far too many different possible relationships to include within the grid below; however, a few of the most common and potentially challenging to navigate relationships have been addressed.

CHOOSE THE TEACHER'S (COACHEE) EXPERIENCE:	CHOOSE THE COACH'S EXPERIENCE:
<p>Considerations for coaching early-career teachers:</p> <ul style="list-style-type: none"> • Understand that you will both experience major transformations in your craft. • Remember that teachers have been guided by current research, which may be more recent than one's own foundations. • Pay attention to the cycles of energy that happen throughout a school year, which may feel like a roller coaster for early career teachers. <p>Considerations for coaching mid-career teachers:</p> <ul style="list-style-type: none"> • Honor ideas that have been honed through classroom experience. • Acknowledge their prior experiences and use those experiences as a jumping-off point for your conversations. <p>Considerations for coaching later-career teachers:</p> <ul style="list-style-type: none"> • Honor the experience they have had with changing ideologies, curriculums, and paradigms over their careers. • Clearly state that you are open to learning from them. - Acknowledge the dissonance they may feel about being coached by a more junior educator. 	<p>New to coaching (1–3 years) and new to coaching for math equity:</p> <ul style="list-style-type: none"> • Focus on reading the resources in advance of working with your teachers in order to build background knowledge. • Select one to three common areas to focus on with your teachers to avoid stretching yourself too thin. <p>Experienced with coaching (4+ years) and new to coaching for math equity:</p> <ul style="list-style-type: none"> • Focus on reading the resources in advance of working with your teachers in order to build background knowledge. • Create a clear scope and sequence of math equity learning to work on with your teacher, using your experience with effective coaching sequences. <p>Experienced with coaching (4+ years) and highly experienced with coaching for math equity:</p> <ul style="list-style-type: none"> • Compare your knowledge with the information provided. See if there is anything new that would be helpful for your work with specific teachers, and add to your existing toolkit. • Create an ambitious scope and sequence of math equity learning to work on with your teachers. • Work with other departments (beyond math), including district and state partners, to identify how to teach and coach for equity in other content areas. Expand your sphere of influence.

- > Let your teacher know that you are doing some coaching for math equity this year. You can explain more of your rationale by indicating the item(s) that you checked off in the [Coach Interest Checklist](#). Let your teacher know that coaching for math equity may require doing some sensitive work, but that it is very rewarding, and you see your teacher as being someone who can make great growth.
- > Ask your teacher to fill out the [Teacher Interest Checklist](#), and explain that they can use the results, as well as your placements on the tables above, to guide your relationship, be transparent about goals, and suggest next steps.

PRINCIPLE 3

To coach for math equity, an instructional leader must establish and continue to grow comfortable with having conversations that may feel uncomfortable and even embarrassing, and these conversations that may induce strong emotions from both parties.

Having “**Courageous Conversations**” about equity is incredibly valuable for moving from cognitive dissonance into a breakthrough of new learning, according to Glenn E. Singleton (2014). This will be particularly important throughout the emotionally difficult work of coaching for math equity. The work for math equity is essential and urgent, and it is important for both the coach and teachers to understand that there will likely be uncomfortable moments along the way. Feeling uncomfortable is not a moment to turn away from the necessary work of coaching for equity. Instead, it is important to notice and accept that this is normal.

- > Look at the [Math Equity Framework and Action Steps for Coaches](#). Together with your teacher, use the guiding questions to determine in which Category you want to start your work.
- > To find more structure and best practices for these conversations, use the coaching tools from [The Art of Coaching](#) and other works by Elena Aguilar. Two especially useful tools are the [Coaching Stems](#) and [Prompts for Reflection](#).

PRINCIPLE 4

It is important to provide structured time and opportunities for teachers to implement their knowledge of student-centered, equitable math practices that support language development.

Instructional coaches have the potential to scale their impact to a number of classrooms and students in order to dismantle the culture of white supremacy that exists within the math classroom. With that aim in mind, there are two types of learning cycle structures suggested within this framework. They are rooted in improvement science, specifically the steps of planning, taking action, studying results, and reflecting on improvements that can be made from each learning cycle. The two cycles are (A) Math Equity Coaching & Growth Cycle and (B) Instructional Acceleration Days. Both can be done in person, within a virtual coaching and teaching environment, or in a blended model. A coach may identify advantages to one learning cycle structure over the other, so examining the relationships within the department, the relationship with the coach, and the school wide/department goals will be necessary when choosing appropriate structures. Consider the following elements when planning your first [Learning Cycle](#).

- > When planning learning cycles, coaches should ensure that these cycles meet the three following criteria: I) learning cycles are student-centered, II) they focus on equitable math practices, III) and they support English language development.
- > Be sure to orient toward a specific objective for student learning as the central element in your plan, and include ways to monitor and assess teacher and student learning objectives.
- > Consider how you will share the results of this learning, including any breakthroughs, in professional development environments or in conversations with community members.
- > Use your reflection and feedback from your teacher(s) to plan each next learning cycle. You may choose to continue in the same category to go deeper into an element provided, seek out additional resources, or pivot to a different category.
- > Move through as many math equity learning cycles as possible within a school year given available time, resources, and energy.

Learning Cycle Structures

STRUCTURE A: MATH EQUITY COACHING & GROWTH CYCLE

This structure can be used in one-to-one coaching or as part of a department-wide professional learning cycle.

- **Start with Data**
Initiate a learning cycle with your teacher or mentee by starting with an engaging entry-point: a pre-assessment survey, a short article, or the results from an observation tool. Work with the teacher to gather initial data connected to student math learning and/or the selected area for teacher learning. You can use the materials provided or generate your own entry-point.
 - Examples of data sources could be student interviews, grades, assignments, a classroom observation, an evaluation, etc. For classroom observations, consider using [SERP 5x8](#) or [EQUIP](#).
- **Interrogate the Topic**
Begin by reviewing sources in the Learn column of the Math Equity Framework with your teacher. Consider this an opportunity for you and your teacher to explore and inquire together. From there you can toggle back and forth between “Learn” (Knowledge), “Practice” (Skills), and “Consider” (Emotional Intelligence). The three elements are designed to work in tandem with one another, so remember to include each one.
 - Select relevant items to read or examine from the coaching resources provided within this toolkit.
 - Identify areas that resonate with the teacher, as well as items that feel new or uncomfortable.
 - Talk through difficult concepts using the coaching stems and protocols suggested.
- **Identify a Shift**
Use the learning from the resources to identify at least one potential change that the teacher plans to make in their instructional practice to support student learning.
 - Make a plan with the teacher about how to observe and provide feedback on this change.
 - Collect similar relevant data (mirroring the initial data collected at the beginning of the cycle) to have a clear “before” and “after” picture.
- **Assess Results**
Together with the teacher, reflect upon the change made. Look at the “before” and “after” data. Celebrate improvements, talk about how to maintain or integrate learnings into future instruction, and repeat the cycle again as relevant. To document your teacher’s progress and process, use the following guiding questions:
 - Where did I previously stand on this issue of math equity?
 - Where do I currently stand on this issue of math equity?
 - What knowledge and skills have I developed as a result of this coaching series?
 - How has my daily classroom practice changed as a result of my new knowledge and skills?
 - How has student learning changed as a result of my new knowledge and skills?
 - Did I achieve my goal through this learning cycle?
 - What went well during this process?
 - What could I have done better?
 - How can I adjust this process next time to better achieve my goal?
- **Determine Next Steps**
If you and the teacher feel like you have made major progress in a particular area, and want to move on to another area identified below before the end of the school year, you can agree together to do so. Otherwise, repeat the cycle within the same topic area with a focus on making meaningful, measurable growth within one of the categories of math equity.

STRUCTURE B: INSTRUCTIONAL ACCELERATION DAYS

This structure adds elements to traditional lesson study. These elements include collaborative lesson planning, teacher rehearsals, and teacher time-outs.

Over the course of a school year, a school or community of teachers will enact several Instructional Acceleration Days. Each teacher will be given an opportunity to teach their students, while other participants observe on one or more days throughout the year. In this framework, we are naming the observed teacher the “fishbowl” teacher. The designated fishbowl teacher will teach the collaboratively developed lesson while other teachers observe. The observing teachers are not to interact with students, but to simply watch.

In an ideal Instructional Acceleration Day—whether in-person, distanced, or blended—collaborators including a coach, a group of teachers, and possibly other invested learners (admins, assistants, etc.) determine several hours or a full day that they can all come together. Pulling educators from regular daily responsibilities for the session ensures that there will be minimal distractions, and sends a clear message to all stakeholders that instruction for math equity is urgent and important.

- **Prior to the Instructional Acceleration Days**, the coach provides a set of learning resources that will ground the work in equity and connect teachers to a collective mission. The coach will also consult with the selected fishbowl teacher on the standards currently being taught, the composition of their classroom of students, any classroom community norms that stand, and any concerns the teacher may have about the upcoming experience of leading a lesson during the Instructional Acceleration Day.

During the Instructional Acceleration Day

- **Enact a Discussion of Pre-work**
A community-building circle or other discussion format is facilitated by the coach. At this time, participants can speak honestly about how they see antiracist math equity work being addressed; their reactions to the instructional resources provided; their reactions to current events in the school community; their feelings about the content; or the learning that has been happening in classrooms. This is an opportunity for everyone to define the collective mission of the day and to focus on positive student outcomes.
- **Ensuring a High-Quality Lesson**
With a clearly agreed upon conceptual goal, an equity goal, and a language goal of the lesson, the coach models the delivery of some high-leverage math activities or tasks, and engages all other participants as sample students. This deepens all teachers’ content knowledge, makes the connections within subject matter more apparent to teachers, allows for teachers to experience the tasks as students, and allows for the coach to demonstrate high quality facilitation techniques.
- **Preparing for the “Fishbowl”**
With the students and the expectations and norms of the classroom in mind, participants collaboratively choose one or several of the activities or tasks demonstrated by the coach to be taught by the fishbowl teacher. Then, with coach as facilitator, they co-author a lesson that is a fit for the selected classroom. The shared development of the lesson is a crucial component of the Instructional Acceleration Day. Keep in mind that during early-year IA Days, the coach may need to guide teachers in developing the lesson, provide more sample lessons, suggest websites to explore, point to a checklist of components of high-leverage tasks, and/or provide a lesson template to follow. If a department is starting from the very beginning of their learning about quality learning tasks, an additional professional learning on critical components of high-leverage instruction might be necessary.
 - A coach might gradually release the lesson planning to the department as the department becomes better equipped at identifying, modifying, or creating mathematical tasks.

STRUCTURE B: INSTRUCTIONAL ACCELERATION DAYS (continued)**During the Instructional Acceleration Day** (continued)**Teacher Rehearsal**

After the lesson is developed, the fishbowl teacher will rehearse the lesson from start to finish with their colleagues as students. Modifications to the lesson should be discussed as the rehearsal progresses. One team member can take notes about the lesson modifications during the rehearsal. Ideas to think about during the rehearsal:

- Introduce the task.
- Address critical learning objectives.
- Make explicit connections to ideas on race and positionality within and beyond mathematics.
- Note instances within the task where students might have misconceptions.
- Ensure language learners—and all groups of students—have access to the content.
- Be clear about teacher questions, questioning techniques, and/or scaffolds to guide students with unfinished learning and to help students think more deeply about the content.
- Anticipate ways the task may need to be modified.
- Call out expected student responses and plan how the teacher will sequence this work during a class discussion. (Smith and Stein, 2011)
- Understand coherence and connections to previous and future math work.

Teacher Time-Outs

Once the fishbowl teacher is in the classroom and is engaged in teaching the co-developed lesson to their students, there will be points within the lesson that are pivotal to determine the direction to take student thinking and direct learning to the desired learning outcomes. A “Teacher Time-Out” is where the teachers in the room can huddle for a few minutes to discuss and determine next steps. Any of the IA Day collaborators can call a Teacher Time-Out at any point in the lesson. The fishbowl teacher asks the students to continue what they are working on as the educator colleagues huddle to discuss poignant observations and next steps. Topics that might be addressed during a time-out:

- A key question the teacher could ask all students.
- An important piece of student work the teacher could share (or have a student share) with the rest of the class.
- How to sequence students’ work for a whole-class discussion.
- Any issues of equity and/or bias that needs to be addressed in the moment.
- How to effectively close the lesson.
- How to maximize remaining time with students.
- Any student work that could be collected to analyze learning results.

STRUCTURE B: INSTRUCTIONAL ACCELERATION DAYS (continued)**Post Work**

- **Reflection**

The fishbowl teacher is allowed the first opportunity to reflect on how they thought the lesson went. Then, each department member has the opportunity to share thoughts. This is a time when brave discussions might be needed. This is also a time where teachers might discuss a gap within Elena Aguilar’s Mind the Gap framework, and how that gap could be addressed through a future “Math Equity Coaching and Growth Cycle.” During this reflection time, the instructional leader also takes stock in teachers’ strengths and areas of growth within the Math Equity Framework and Action Steps.
- **Individual Planning Time**

Collaborators support all participating teachers to incorporate the day’s learnings in order to plan a lesson they will implement in their own classes. Although teachers are planning for their individual classroom instruction, we encourage promoting equity by co-planning with grade-alike or course-alike colleagues. It is expected the teachers will have clear action steps and evidence of growth before the next IA Day.
- **Whole-Group Share Out**

Teachers share out their action plans and equity commitments as a way to build accountability to self and others in the learning community.

A sample agenda for a Instructional Acceleration Day is provided in [Appendix C](#).

Math Equity Framework and Action Steps for Coaches

The three categories of this framework—Building Awareness, Building Learning Partnerships, and Building Foundations for Independent Learners—are inspired by the three major sections of Hammond’s book, *Culturally Responsive Teaching and the Brain*. Under each category heading are guiding questions that teachers and coaches can use to decide whether this is the relevant section for their specific line of inquiry. Beneath the guiding questions, readers will find alignment with the **Standards for Mathematical Practice**, the **Collaborative for Academic, Social, and Emotional Learning**, and the **California English Learner Roadmap**. Each aligned standard is placed in this category due to its perceived conceptual relevance to the larger category (e.g., Building Awareness, etc). The structure is designed to support teachers and coaches in building their mental schema of the connections between the various standards that educators are asked to use or consider when teaching and the urgent work of teaching math for equity.

Each category has three columns, which could roughly be thought of as steps. These columns were inspired by Elena Aguilar’s article *Mind the Gap*. The “Learn” column is focused on building teacher **knowledge** to support math equity. (Example: What kind of learning and knowledge should I explore in order to build my awareness as it relates to math equity?). The “Practice” column offers actionable steps that coaches and teachers can take to build **skills** related to math equity. The “Consider” column aligns with the idea of **emotional intelligence**, and how social emotional competencies support and intersect with knowledge and skill building. Every category and column supports the work of **cultural competence**.

To use this framework, the coach identifies the appropriate category in which to begin using the results from the **Teacher Interest Checklist**. The guiding questions within each category should support coaches and teachers in locating the appropriate category for growth. Next, consider the needs and interests of the teacher to focus your development path. While this tool can be considered a curated “choose your own adventure” launching point for the work of coaching for math equity, it is often the case that to explore an idea fully, it makes sense to work from left to right: “Learn”, then “Practice”, and then “Consider”.

CATEGORY A : BUILDING AWARENESS

CATEGORY A Building Awareness	LEARN Build Knowledge of Antiracism in Math	PRACTICE Skills for Building Awareness of Students	CONSIDER Emotional Intelligence
<p>Guiding Questions</p> <ol style="list-style-type: none"> 1. What is my positionality as an educator? 2. How is culture intertwined with education? 3. What is the sociopolitical context of math instruction? 4. What does it mean to be antiracist? <p>Math Practices Alignment</p> <p>SMP 1. Make sense of problems. and persevere in solving them. Making sense of math is a skill that helps students learn to understand problem-solving strategies in and beyond the math classroom.</p> <p>SMP 2. Reason abstractly and quantitatively. Students draw conclusions based on information. Supporting students with SMP 2 builds reasoning skills.</p> <p>CASEL Alignment</p> <ul style="list-style-type: none"> • Self-Awareness • Self-Management • Social Awareness <p>EL Roadmap Alignment</p> <ol style="list-style-type: none"> 1A. <i>Language and Culture as Assets</i> 1b. <i>English Learner Profiles</i> 3D. <i>Capacity Building</i> 	<p>Pre-Assessments</p> <ul style="list-style-type: none"> • Take the Teaching Tolerance Common Beliefs Survey. • Take the TCTEF Teacher Self-Assessment for Dimension 10. <p>Read the framework offered in Stride 1 of this toolkit: Dismantling Racism in Mathematics Instruction</p> <p>Book Study: Read Hammond’s <i>Culturally Responsive Teaching and the Brain</i>, chapters 2–4. Answer “Invitation to Inquiry” questions at the end of each chapter.</p> <p>Book Study: Read Gibbons’ <i>English Learners, Academic Literacy, and Thinking</i>, chapters 1 and 3.</p> <p>Book Study: Read TESOL Press’ <i>Teacher Leadership for School-wide English Learning</i>, chapters 4–5. Look through the additional resources provided.</p> <p>Additional Resources</p> <p>Asset-Based Approaches to Equitable Mathematics Education Research and Practice</p> <p>The “Soft Bigotry of Low Expectations” And Its Role in Maintaining White Supremacy through Mathematics Education (pages 9–13)</p> <p>Teaching at the Intersections</p> <p>Whose culture has capital?</p> <p>Racism, Non Racism, and Antiracism</p> <p>Scaffolded Antiracist Resources for white teachers</p> <p>Tool: Recognizing Microaggressions</p> <p>History of Mathematics</p> <p>Social Justice Math and Science Resources</p>	<p>For Coaches</p> <ul style="list-style-type: none"> • Follow the Study Guide at https://crtandthebrain.com. • Support your teacher in implementing a strategy from one of the book study options. • Complete the workbook exercises in Stride 1: Dismantling Racism in Mathematics Instruction with your teacher • Use the Moving Toward Antiracism Tables tool to identify current examples of non-racism within your teacher’s practice, starting with the intrapersonal domain of power. • Brainstorm to identify the six forms of cultural capital that students at the school bring with them. • Speak out against reductive, deficit-focused narratives of student achievement. <p>For Teachers</p> <ul style="list-style-type: none"> • Do an iceberg activity to learn about your students’ id entity and values. • Ask students to write about their math journey. • Create surveys to learn more about students’ interests and values. • Discuss ways to learn more about your students with your coach and teaching colleagues. 	<p>Pre-Assessments</p> <ul style="list-style-type: none"> • Take an informal test on emotional intelligence: Institute for Health and Human Potential, Psychology Today, or PsychTests. <p>Book Study: Read Attachment in the Classroom: <i>The Links Between Children’s Early Experience, Emotional Well-being and Performance in School</i> by Dr. Heather Geddes.</p> <p>For Coaches</p> <ul style="list-style-type: none"> • Take a look at the aligned Emotional Intelligence questions in Aguilar’s Coaching Lenses (p. 4). • Consider using these Coaching Stems when having emotionally precarious conversations.

CATEGORY B : BUILDING LEARNING PARTNERSHIPS

CATEGORY B Building Learning Partnerships	LEARN How to Build Learning Partnerships in Math	PRACTICE Strategies for Build Learning Partnerships with Students	CONSIDER Emotional Intelligence
<p>Guiding Questions</p> <ol style="list-style-type: none"> 1. How do my relationships with students guide learning? 2. How can I build effective learning partnerships with students? 3. What is culturally responsive pedagogy? <p>Math Practices Alignment</p> <p>SMP 3. Construct viable arguments and critique the reasoning of others. Expressing ideas, listening to the ideas of others with care, and learning to agree and disagree are life skills that allow students to evaluate math tasks and the world.</p> <p>SMP 7. Look for and make use of structure. Understanding the structure of the systems in which we operate is a pathway to understanding changes that can make a difference.</p> <p>SMP 8. Look for and express regularity in repeated reasoning. Students' abilities to make connections across mathematical and non-mathematical ideas allow for deeper evaluation of their experiences.</p> <p>CASEL Alignment</p> <ul style="list-style-type: none"> • Relationship Skills • Responsible Decision Making <p>EL Roadmap Alignment</p> <ol style="list-style-type: none"> 1A. <i>Language and Culture as Assets</i> 1C. <i>School Climate</i> 1D. <i>Family and School Partnerships</i> 2E. <i>Use of Students' Home Languages</i> 3D. <i>Capacity Building</i> 	<p>Pre-Assessments</p> <ul style="list-style-type: none"> • Take the TCTEF Teacher Self-Assessment for Dimensions 1–3 and 9. • Propose a classroom observation using EQUIP or SERP 5x8 to see student participation patterns grouped by race, language proficiency, or gender. <p>Book Study: Read chapters 5 through 7 of Hammond's <i>Culturally Responsive Teaching and the Brain</i>. Use the Study Guide to identify areas for teacher allyship and partnership with students.</p> <p>Book Study: Read TESOL Press' <i>Teacher Leadership for School-wide English Learning</i>, chapters 4. Look through the additional resources provided.</p> <p>Additional Resources</p> <ul style="list-style-type: none"> • Watch Culturally Relevant Pedagogy in Mathematics: A Critical Need Shelly Jones TEDxCCSU • Explore The Algebra Project to examine the work already begun on positioning students as experts of their learning. • Look at the TRU Framework materials, with a focus on "Equitable Access to Content" and "Agency, Ownership and Identity." 	<p>For Coaches</p> <ul style="list-style-type: none"> • Support your teacher in implementing a strategy from one of the book study options. • Propose a classroom observation using EQUIP or SERP 5x8 to see student participation patterns grouped by race, language proficiency, or gender. • Use the Stride 4 Tool: "Connecting Critical Intersections" in this toolkit with your teacher to support students in being able to talk and process new learning in their home language. • Use the TRU Conversation Guide with a particular focusing on "Equitable Access to Content" and "Agency, Ownership and Identity." • Lead a professional development or coaching session on Students Working Collaboratively. • Seek relevant resources in NCTM's 100 Days of Professional Learning webinars. <p>For Teachers</p> <ul style="list-style-type: none"> • Create classroom community agreements at the beginning of the year. Continually return to and reflect on these agreements. • Complete Teacher-to-Student Interaction Tracking. • Gather expert feedback from students about their experience in the class. • Try using sentence starters with a focus on empathy. • Implement proactive restorative circles to build community as a class. • Connect with families in a proactive and positive manner by sending a weekly text or email update about what is happening in class. Encourage two-way communication using the same tool (sample). • Explore equity-based lesson plans on Teaching Tolerance and choose one to implement. • Use translanguaging strategies in the classroom. • Use Oakland Unified School District's Asset-based Cards when planning. 	<p>Relationship Skills</p> <p>Book Study: Learn about Restorative Justice practices using the book <i>Circle Forward</i> by Carolyn Boyes-Watson and Kay Pranis.</p> <ul style="list-style-type: none"> • Read an article about attachment theory. • Examine and address the root causes of student behavior using this behavior response plan. • Find concrete ways to start conversations with students such as Table Talk. <p>Additional Learning Materials</p> <p>Self-Awareness: Learning about students can often leave teachers vulnerable. It helps to listen to how teachers can work through their own vulnerabilities and have adapted to change.</p> <p>Self-Management: Understand the Escalation Cycle of Behavior and how it relates to both teachers and students</p> <p>Responsible Decision Making</p> <p>Read and implement strategies from <i>Designing Groupwork: Strategies for the New Heterogeneous Classroom</i>.</p>

CATEGORY C : BUILDING INTELLECTIVE CAPACITY

CATEGORY C Building Intellectual Capacity	LEARN How Students Turn Disconnected Facts into Connected Knowledge	PRACTICE Skills for Building Awareness of Students	CONSIDER Emotional Intelligence
<p>Guiding Questions</p> <ol style="list-style-type: none"> 1. Why is mathematical rigor important for my students? 2. What are the mathematical routines that promote critical thinking? 3. How do I create a social justice math curriculum? 4. How do I set students up for success in the 21st century? <p>Math Practices Alignment</p> <p>SMP 4. Model with mathematics. Students learn that math can be a powerful tool to visually and symbolically communicate ideas</p> <p>SMP 5. Use appropriate tools strategically.</p> <p>SMP 6. Attend to precision. Teachers assist students in taking care with words and actions.</p> <p>CASEL Alignment</p> <ul style="list-style-type: none"> • Self-Management • Responsible Decision Making <p>EL Roadmap Alignment</p> <ol style="list-style-type: none"> 1A. <i>Language and Culture as Assets</i> 2A. <i>Integrated and Designated ELD</i> 2B. <i>Intellectually Rich, Standards-based Curriculum</i> 2C. <i>High Expectations</i> 2D. <i>Access to the Full Curriculum</i> 2E. <i>Use of Students' Home Languages</i> 2F. <i>Rigorous Instructional Material</i> 3C. <i>Capacity Building</i> 4C. <i>Coherency</i> 	<p>Pre-Assessments</p> <ul style="list-style-type: none"> • Take the TCTEF Teacher Self-Assessment for Dimensions 4–8. • Propose a classroom observation using EQUIP or SERP 5x8 to see student participation patterns grouped by race, language proficiency, or gender. • Take the ELSF Taking the Pulse Survey. <p>Book Study Suggestions</p> <ul style="list-style-type: none"> • Read Hammond's <i>Culturally Responsive Teaching and the Brain</i> chapters 8 through the end. • Read "Seeing As Understanding" by Jo Boaler. • Read Gibbons' <i>English Learners, Academic Literacy, and Thinking</i>, chapters 2, 4–8. • Read TESOL Press' <i>Teacher Leadership for School-wide English Learning</i>, chapters 3, 5–6. Look through the additional resources provided. <p>Additional Resources</p> <ul style="list-style-type: none"> • ELSF's "Math Best Practices, Must Haves, and Pitfalls" • Hammond's MindShift article on distance learning. • TRU Math Framework • Using Math to Make Sense of Our Word: Pandemics, Viruses, and Our Actions (NCTM video) • Solving the Problematic: Creating Tasks, Lessons, and Projects That Model Our Actual, Messy World (NCTM video) • NCTM's Beyond Good Teaching • Seek more resources in NCTM's 100 Days of Professional Learning webinars • Seek relevant resources on Colorín Colorado 	<p>For Coaches</p> <ul style="list-style-type: none"> • Support your teacher in implementing a strategy from one of the book study options. • Use the SERP 5x8 professional development section and deck • Use the Stride 2 Tool: "Fostering Deep Understanding" in this toolkit for planning and then role-playing with your teacher to get more comfortable with the provided strategies. Collaborate with the teacher to anticipate alternate procedures, and focus on affirming student responses. Discuss why it is important to honor student voice. • Use this Protocol with your teacher to set an "Inquiry Focus" on English learners. • Use the Stride 4 Tool: "Connecting Critical Intersection" in this toolkit with your teacher to identify strategies to support English language learning in mathematics. • Support your teacher in implementing one of the EL math instructional practices on ELSF Resources. • Collaboratively browse PBL Works for tools and resources while planning a project-based math unit. • Support your teacher in adapting a social justice mathematics unit for middle school using Osler's Guide or NCTM's <i>High School Mathematics Lessons to Explore, Understand, and Respond to Social Injustice</i> • Use the TRU Conversation Guide with a particular focusing on "The Content," "Cognitive Demand," and "Formative Assessment." <p>For Teachers</p> <ul style="list-style-type: none"> • Ensure that you are writing daily language objectives tied to the content objective. • Review and implement the language scaffolds from Stride 4 of this Toolkit. • Explore how to make all math instructions visible with accurately labeled representations by visiting MakingMathVisible.com. • List ways that one might elicit students to interact with each others' ideas. • Practice using Math Language Routines and other Jeff Zwiers Tools with students. • Connect the concepts on equality (equal sign), comparison (ratios and proportions), and inequality (greater and less than) in discussions. 	<p>Self Management</p> <p>Work on SMART goal setting for students.</p> <p>Responsible Decision Making</p> <p>Read and implement strategies from <i>Designing Groupwork: Strategies for the New Heterogeneous Classroom</i>.</p> <p>Additional Reading</p> <p>A detailed explanation and numerous examples of the problem-solving and computational processes of a child, from the lens of an emotionally intelligent framework: Children's Mathematics: Cognitively Guided Instruction.</p> <p>Use Stride 3 Tool: Creating Conditions to Thrive with your teacher to identify opportunities to connect student Social Emotional Academic Development to the Standards for Math Practice</p>

Appendix A. Coach Interest Checklist and Coach Pre-Assessment

COACH INTEREST CHECKLIST

- My site is using *Culturally Responsive Teaching and the Brain* to support teacher professional development.
- My site is using *The Art of Coaching* to support instructional coaches.
- My site has made supporting English learners a school-wide goal.
- My site has made supporting academic English mastery a school-wide goal.
- Teachers I support would benefit from learning more about how to support English learners in their classrooms.
- Teachers I support would benefit from learning more about how to support standard English learners in their classrooms.
- Teachers that I support would benefit from learning more about antiracism and/or culturally relevant pedagogy.
- Teachers that I support would benefit from integrating social emotional development in the math classroom.
- I am looking for more resources to support my professional development as a math coach or professional development leader.

If you checked any of those boxes, this tool will be a helpful guide for you.

COACH PRE-ASSESSMENT

Choose a survey as a source of data for yourself, as you take stock of your own positionality.

- Take the Teaching Tolerance “Common Beliefs Survey” and look at the discussion prompts afterwards. How do you feel?
- Take the Harvard Implicit Association Test focused on race and/or gender and then reflect on results. How do you feel? What else do you want to know or do as a result?
- Answer the ELSF Taking the Pulse questions. Does this seem right? What else do you want to know or do as a result?
- Take the Institute for Health and Human Potential emotional intelligence test. How do you feel?

Appendix B. Teacher Interest Checklist

TEACHER INTEREST CHECKLIST

- I am reading or interested in reading *Culturally Responsive Teaching and the Brain* by Zaretta Hammond.
- I am reading or interested in reading a book about supporting English learners in my classroom.
- I want to know if I am adequately supporting my multicultural and multilingual learners in math.
- I am interested in learning more about how to apply culturally relevant instructional practices in my classroom.
- I want to learn more about how antiracism applies to math instruction.
- I want to learn more about how social and emotional learning applies to math instruction.
- I am interested in learning more about how to integrate language scaffolds in my classroom.
- I would like support with designing or implementing a social justice math curriculum.
- I believe that math classrooms should be equitable.

If you checked any of those boxes, this tool will be a helpful guide for you.

Appendix C: Instructional Acceleration Day Sample Agenda

SAMPLE AGENDA

08:00 - 08:20 am	Welcome and Inclusion Activity
08:20 - 09:20 am	Discussion of Pre-work
09:20 - 09:45 am	Coach Demonstration of Learning Tasks
09:45 - 10:00 am	Break
10:00 - 10:30 am	Collaboratively Design Learning Task
10:30 - 11:30 am	Teacher Rehearsal
11:30 - 11:40 am	Transition to Classroom
11:40 am - 12:30 pm	Fishbowl with Time-Outs
12:30 - 01:00 pm	Lunch
01:00 - 01:45 pm	Fishbowl Reflection
01:45 - 02:30 pm	Individual (or Grade-Alike/ Course-Alike) Planning
02:30 - 03:00 pm	Whole-Group Share

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