

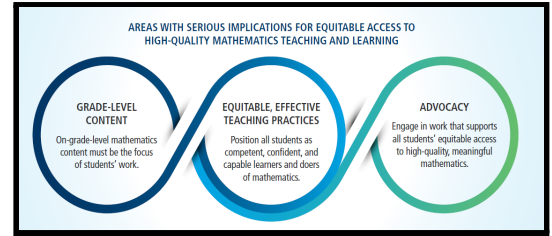
### 3 Strategies to Support NCTM's Equitable, Effective Teaching Practices from NCTM

This past week I had the opportunity to teach math in a 4th grade classroom. I went in, taught the lesson and though there were some really good moments, the lesson and interactions felt off. I was solid with the grade-level content but didn't make enough time for the connections between students and myself that were needed.

As I reflected on the lesson, I was reminded of the second area from [Continuing the Journey: Mathematics Learning 2021 and Beyond](#), Equitable, Effective Teaching Practices.

NCTM references five actions within this area:

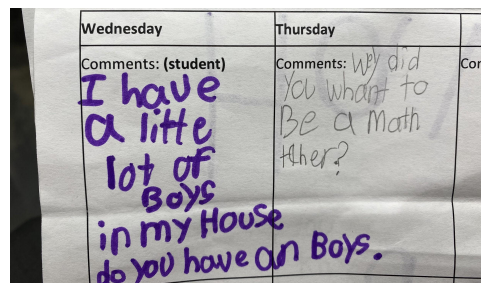
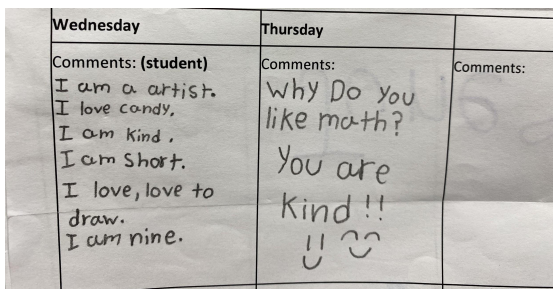
1. **Cultivating Productive Instructional Mindsets and Practices** - recognize, *believe in* and build on *strengths* of students
2. **Building Positive Mathematical Identities** - get to know *who the students are*, their *interests* to plan *intentional instructional connections*, *listen* to their questions, reasoning and how they *communicate their thinking*
3. **Creating an Equitable Classroom Culture** - classroom *community* with *co-created norms* for engagement & interaction
4. **Making Connections through Instruction** - opportunities to *make connections*
5. **Creating a Culture of Collaboration**



With these in mind, I went in the next day with 3 strategies.

1. **Name Tents From Sara Van Der Werf** - I started class by having kids make name tags so I could ensure I was saying each child's name. At the end of class as a reflective closing activity, I had each 4th grader tell me something about themselves and encouraged them to ask questions of me. I then wrote back to each and passed them out at the beginning of class the next day so I again had their names front and center as well as new connections. Throughout class, students came up to me individually to answer the questions I had asked and comment on what I had shared.

This activity allowed me to get to know *who the students are*, their *interests*, *strengths* and we made *connections*.



2. **Problem Strings** - I was so excited that I was able to do a Problem String from the curriculum as I knew it would help me gauge what students knew about multiplication, strategies they were using and position them as mathematical authorities. With the first problem, they immediately got to work and the strategies they used were incredible! There were arrays, number lines, loops and groups, decomposing of numbers, related facts, doubling and halving and so much more. I am pretty sure my excitement in their math thinking surprised them a bit. As we built from one problem to the next, students explained their strategy, the strategy became theirs as I added their name next to it (bonus for me as it was another way to practice their names) and as a collective, they had to tell me how each problem

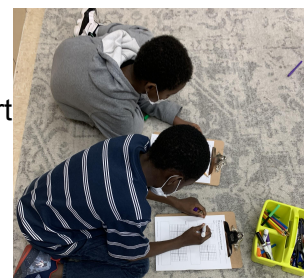
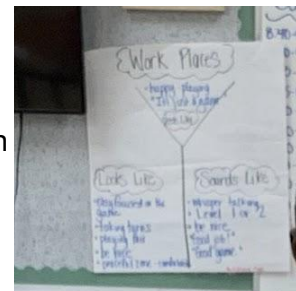
Problem String One More or One Less

Problems	Sample Strategies & Recording
$3 \times 4$	$3 \times 4 = 12$
$3 \times 8$	$3 \times 8 = 3 \times (4 \times 2) = (3 \times 4) \times 2 = 12 \times 2 = 24$
$3 \times 9$	$3 \times 9 = 3 \times (8 + 1) = (3 \times 8) + (3 \times 1) = 24 + 3 = 27$
$3 \times 7$	$3 \times 7 = 3 \times (8 - 1) = (3 \times 8) - (3 \times 1) = 24 - 3 = 21$

connected to the next. On day three when we were playing a new game, a student actually referenced another student's way when describing how she solved a problem!

This activity furthered my *belief* that students can engage in grade level content. I found student *strengths* while *listening* as they *communicated their thinking*, built intentional *instructional connections* and facilitated a space to grow *positive mathematical identities*.

3. **Math Games** - Our math program includes games a few days a week to apply new learning. I was thrilled to introduce the new game and set the expectations. Using a [Y Chart from Responsive Classroom](#) students created agreements about how it would look like, sound like and feel like during this time. As I walked around students were engaged in applying their learning and were holding each other accountable to having fun, staying on task, and cheering each other on. My suggestion to the substitute was to make time for these games each day even when it wasn't referenced in the lesson as a time for the teacher to check in on student understanding and a time for students to pause, unwind and play. The feeling in the room was so much more relaxed during this time. At the end of the games, we reflected on how the class and individuals did, reflecting on what went well and what they could do better. We then referenced those things to work on at the start of games the next day.



While we have games embedded within our program, there are some fun tasks on [Jo Boaler's YouCubed site](#).

This final activity was a time to get to know *who the students are*, their *interests*, *listen* to their questions, reasoning and how they *communicate their thinking*. It supported and grew the classroom *community* with *co-created norms* for engagement & interaction and provided opportunities for students to *make connections*, *instructionally* and with each other.

The next two days felt so much better. I felt a deeper connection to the kids and I believe they did with me and each other as well. We didn't accomplish as much as I would've liked from a content perspective but from a classroom community perspective, we grew exponentially!

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