

Asset-Focused Co-Noticing Tool: Co-Confering Primer

Conferring with students during a mathematics lesson is more than just circulating the room and checking in on their progress. Thoughtful conferring creates opportunities for teachers to gather specific and useful information about how individual students are making sense of mathematical ideas which can inform both immediate and future instructional decisions (Thanheiser & Melhuish, 2023). These conversations can also create opportunities for teachers to “nudge” or advance students’ thinking, supporting them to make new connections or develop deeper understanding (Munson, 2018). At the same time, conferring can support teachers to build relationships and strengthen students’ mathematical identities through interactions characterized by genuine curiosity and excitement about students’ ideas. Managing these goals and opportunities in-the-moment is complex and dynamic. It involves noticing and responding to nuanced aspects of students’ mathematical work through careful questioning *while* attending to students’ assets, identities, participation and relationships in the mathematics classroom.

The Asset-Focused Co-Noticing Tool (ACT): Co-Confering is a protocol designed to create intentional opportunities for teachers to collaboratively practice asset-focused noticing as they confer during mathematics lessons. The tool prompts TCs and MTs to select focal students they are especially interested in learning more about and offers a structure for the teachers to confer with students side-by-side (i.e., co-confer) during the lesson as they work together to understand and surface students’ ideas and strengths. During the conference, one teacher focuses primarily on eliciting student thinking while the other takes notes or chimes in with additional follow-up questions for the students. The goal is to create a shared opportunity to practice the work of asset-focused conferring (rather than circulating and conferring with students separately) and to give teachers the opportunity to reflect on the relationship between their questioning and what they were able to learn about each focal student.

The tool has three parts:

- **Part 1, Prepare to Co-Learn:** The MT and TC select 2-3 focal students to confer with, discuss what they hope to notice/learn about and plan who will lead each conference.
- **Part 2, Co-Confer During Instruction:** The MT and TC circulate side-by-side and collaboratively confer to elicit and make sense of focal students’ mathematical assets
- **Part 3, Debrief:** The MT and TC debrief about what was learned about students’ assets and the work of conferring.

See below for an example of what using this tool might sound like...



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An Example:

Part 1: Prepare to Co-Learn (~7-10 min)

TC Paul and MT Ramya sit side by side with a copy of ACT: Co-Confering to plan for their co-learning. They are working on multi-digit division with their 5th graders and focused on trying to support students to make sense of the remainder in relation to real-world contexts. Students will be working on this problem: *An elementary school is taking 256 students and teachers to the Woodland Park Zoo in Seattle. If each school bus holds exactly 42 passengers, how many buses are needed to transport everyone?*

TC Paul and MT Ramya decide they will confer with two students. They select Rosie because they notice she is especially quiet at her table group, making it difficult for them to know much about her understanding of division. They also decide to confer with Manny who often writes answers (sometimes correct, sometimes incorrect) without showing work. They are hoping to learn more about his strengths and areas for growth.

MT Ramya and TC Paul make a plan for co-confering:

TC Paul: Okay, so I can lead the conference with Manny to start.

MT Ramya: Perfect! I will take notes about the strengths and ideas I'm noticing. I'll plan to lead the conference with Rosie after that.

TC Paul: Great, and feel free to hop in if you want to ask any additional questions.

MT Ramya: Sounds good.

TC Paul: For both, I think we can just start by asking them how they solved the problem and how their strategy relates to the story. So maybe questions like, "Tell me about what ____ represents?" And then, if they have an answer already, ask them what they did about the remainder?

MT Ramya: That sounds great, but I am realizing for Manny that could be tricky if there's not much written down. I wonder if we ask some questions about what

Part 1 (Before Instruction)
Choose focal student(s) & plan for co-confering



STEP 1: Choose 2-3 students you and your co-learner would like to learn more about during this lesson.
Questions to consider:

- Why are we interested in learning more about these focal students?
- What do we know about these students already?
- What mathematical assets and strengths have we noticed about these students?
- What questions do we have about these students' mathematical understandings and assets?

STEP 2: Make a plan for how you will confer with your focal students.
Look at the task(s) students will be working on during the lesson:

- How might students approach this task?
- What are we hoping to learn about focal students' thinking?
- What questions might we ask? (See Part 2 for examples)
- What else do we want to consider to prepare for conferring with our focal students?

STEP 3: Make a plan for how you will circulate side by side and confer together.

- When will we confer with students during the lesson?
- Who will lead the conference with each focal student?
- Who will take notes and observe?

NOTE: You might decide to alternate roles for each conference.

- **Be sure to tell students why you are circulating and conferring together:** E.g., "Today we will be working together to learn more about your thinking. During work time we might stop by together to ask questions about your ideas. Thanks for helping us learn!"



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he understands about the context and then something like, “How do you think you could get started? What might you be able to draw/build to show what is happening in the story?”

TC Paul: I love that idea.

MT Ramya: Oh and remind me at the beginning of class to share why we’re circulating together today. We don’t want students to feel uncomfortable about having two teachers hovering over them!

Part 2: Co-Notice *During Instruction* (~ 1-2 min)

TC Paul and MT Ramya meet up during small group time as students are working on the zoo problem. They stop at Manny’s table first and see that he has written down 256 divided by 42, but nothing else. TC Paul begins the conference while MT Ramya observes:

TC Paul: Hey Manny! Tell me about what you have started here.

Manny: I wrote 256 divided by 42.

TC Paul: Nice! Can you tell us about why you wrote that down?

Manny: We’ve been doing division problems.

TC Paul: That’s true! I’m curious about what the numbers in your equation mean in the story. Like what does the 256 represent? What does the 42 represent?

Manny: I guess the 256 is the students and the 42 is how many students are on each bus.

TC Paul: Oh, interesting. And we’re trying to figure out how many buses you need to bring everyone to the zoo...Hmm. So how are you thinking about figuring that out?

Manny: Well, I think it’s going to be about 5.

TC Paul: Wow! How’d you come up with that?

Manny: Well, if the buses had 50 then there would be two buses for 100, two more buses for two hundred and then one more bus for the 56.

Part 2 (During Instruction)
Circulate, notice and confer together

Teacher A:
Leads the conference

Possible questions:

- This is so interesting! Can you tell us a little more about your thinking?
- How did you get this?
- Why/how does that work?
- What feels hard or confusing?
- What questions do you have about this problem?
- Teacher B, do you have any questions you want to ask?

Co-Confering
The goal of these conferences is to elicit students' current mathematical ideas and assets.
Try to avoid coaching or correcting students.

Can you tell us a little more about your thinking?

Teacher B:
Collect data for debrief

Jot down:

- The questions Teacher A asks
- The ideas/thinking each focal student says
- Representations or visuals the student writes down or references

Note:
You might ask students follow-up questions if invited to do so by Teacher A.



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TC Paul: That strategy makes a ton of sense to me. It sounds like you chose an easier number to work with to get a close estimate. Is that right?

Manny: Yeah.

TC Paul: MT Ramya, do you have any other questions?

MT Ramya: Manny, I am curious, do you think the answer will be *exactly* 5 buses?

Manny: I don't know.

MT Ramya: What ideas do you have about how you could check to find out? Is there something you could draw? Or build maybe with Unifix cubes?

Manny: I could make groups of 42.

MT Ramya: How would you use the groups of 42 to figure out how many buses?

Manny: I'd make them until I hit 256.

MT Ramya: I think that's a really interesting idea. I wonder, do you think your table partner Joe would want to try that with you? Joe, what do you think?

Joe: Okay.

TC Paul: Great!

TC Paul and MT Ramya then walk over to Rosie's table group to begin conferring with her.

Part 3: Debrief (~7-10)

TC Paul and MT Ramya meet during their planning period to debrief what they learned about students and about conferring.

MT Ramya: Gosh, hearing about Manny's strategy for estimating was super exciting. It really helped me realize how much I am assuming when students don't have a lot written down.

TC Paul: Totally. It made me think about how maybe we can highlight the value of estimating more with the whole group.

MT Ramya: Oh nice! Maybe we can have a discussion tomorrow about when and why we estimate, and how to move from an estimate to an exact answer. Could be a good way to center Manny, too.

Part 3 (After Instruction)

Reflect on our learning and make new plans



Directions: Use the prompts below to debrief your co-learning. Challenge yourselves to use specific evidence from the lesson to support your reflections and ideas. Bring student work and your notes to support this discussion.

Reflect on our Focal Students:

1. What do we notice about each focal student's math understandings and assets?
 - a. Specifically, what strengths do we notice about students' procedural fluency, conceptual understandings, problem solving/reasoning?
2. How can we build on what each focal student does understand to support their own or whole class learning in the future?
3. How were our assumptions about focal students challenged by what we noticed? What surprised us? Why?

Reflect on Asset-Focused Conferring:

4. What did we notice about the work of conferring with students?
 - a. What teacher moves or questions did you notice that seemed especially productive? Why?
 - b. Were there any moments that felt tricky or challenging?
5. What do we want to try next when conferring with students?
6. What new ideas or questions do we have about asset-focused conferring?

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TC Paul: I love that idea. That was one of the most important moments for me in the conference was when you hopped in to ask how he can use his strategy for figuring out the “5” estimate to find the exact answer. I really wasn’t sure what to ask after he explained his strategy. I didn’t want to feel like I was correcting him. I also thought about asking him what to do with the left over 6 since $50 \times 5 = 250$ not 256, but I think saving that for later made more sense.

MT Ramya: Yeah I thought about that too, then I decided we would discuss the role of the remainder in the whole class discussion.

TC Paul: Bringing in Joe was a great idea tool.

MT Ramya: Yeah, I think that worked well. Joe had a different answer and strategy, so this gave them a way to try something and check each of their answers.

TC Paul and MT Ramya continue to debrief about their conference with Rosie.

For more information about our co-learning tools including related resources and publications, please visit our website: www.colearnemt.org

References

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Thanheiser, E., & Melhuish, K. (2023). Teaching routines and student-centered mathematics instruction: The essential role of conferring to understand student thinking and reasoning. *Journal of Mathematical Behavior*, 70. <https://doi.org/10.1016/j.jmathb.2023.101032>



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