

Integrating Language Routines Into Instruction

Critique, Correct, and Clarify

Students can start making sense of academic content and negotiate meaning in a language before they understand a language completely.

Grades K–2

Language Routine: Critique, Correct, and Clarify

The purpose of this routine is to optimize output by giving students a piece of mathematical writing that is not their own to analyze, reflect on, and develop. The intent is to use an incorrect, incomplete, or ambiguous written argument or explanation that students improve upon by correcting errors and clarifying meaning, thereby advancing their own mathematical thinking and communication.

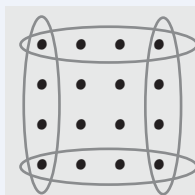
Routine	
PRESENT	Present a partial/broken argument, explanation, or solution method. The teacher can play the role of the student who produced the response and ask for help in fixing it. <ul style="list-style-type: none">• <i>Given response could include a common error</i>• <i>Given response should include an ambiguous term or phrase, or an informal way of expressing a mathematical idea</i>
PROMPT	Prompt students to identify the error(s) or ambiguity, analyze the response in light of their own understanding of the problem, and work both individually and in pairs to propose an improved response.
SHARE	Pairs share out their drafts of the improved response.
REFINE	Students refine their own draft response.

(continued)

From the Classroom

PRESENT

Ms. L: *I asked students in another class to tell me how many dots they see in this group. This student is asking for our help. He knows he made a mistake but isn't quite sure what he needs to do fix it. He said he saw 20 dots. He saw 4 on the top, 4 on the bottom, 4 on the left and 4 on the right. That gave him a total of 16, and then he added the last 4 in the middle and got 20.*



I counted 20 dots. 4 on the top, bottom, left, and right, and 4 in the middle.

PROMPT

Ms. L: *Look at this work for a minute and think to yourself about what you notice. What would you tell him? I'll give you a minute on your own to think.*

[Ms. L Pauses for a full minute while students analyze the student work]

Turn to your elbow partners and talk this through. What are your thoughts? How can we help this student with his work?

[Ms. L circulates as students discuss. She allows 2-3 minutes for partners to discuss before pausing their discussions]

On a piece of paper, you and your partner will show this student how to count the dots correctly. Include pictures, numbers, and words – anything that you think will help this student understand his mistake.

SHARE

Ms. L: [after allowing students 5 minutes to record their thoughts]

You are going to join with another pair, making a group of four. Each pair will take turns sharing with the others what they would tell this student about his error. I'll signal when it is time for the next pair to start sharing.

[While students work in their groups, Ms. L circulates, listening to student discussions and noting similarities and differences between student approaches]

REFINE

Ms. L: *Let's take a few minutes to gather all our thoughts and decide what makes sense to tell this student about his work. Get back together with your original partner and refine your work to include any of the ideas you heard from others that you think are important. You can add to or change what you have. We want to support this student with words, with pictures, with numbers, anything we possibly can to help make sense of the problem. You have 5 minutes to complete your work.*