

# Nonverbal and Verbal Communication Routine

GRADES 3-6

Math	
AREA OF FOCUS	I Interdependence of Mathematical Content, Practices, and Language
	II Scaffolding and Supports for Simultaneous Development
GUIDELINE	3 Regular and varying opportunities to learn, reflect upon, and demonstrate learning of mathematics using a variety of modes and forms
	4 Opportunities for students to interact with and produce a variety of methods and representations
SPECIFICATIONS	3b Highlight, define, illustrate, and show the purpose for mathematical language within the context of the lesson (not in isolation)
	4b Encouragement for students to actively build their own understanding of mathematics, using language, through sustained activities and experiences

## Description of resource and intended audience:

Students will compare methods of problem solving, engage with and critique others' approach, and determine the most efficient method through both non- oral and oral interaction.

**Materials needed:** Poster chart paper

**Approximate time needed:** Varies

### Instructions:

Place students in groups of 3-4 and direct students to solve an application problem. Keep the context consistent, using no more than two different problems with the same context in order to keep a focus on the skill vs. decoding context. Allow students to work in groups to solve the problem on poster chart paper. Teacher arranges the posters in order from least sophisticated/efficient solution strategy to most sophisticated/efficient. Students then start at their poster and move in the direction of more sophisticated/efficient, so that they have more to consider and discuss, as opposed to offering less substantial critiques.



Each student will be responsible for making a compliment and/or critiquing at least two posters, writing their response on sticky notes, and posting them for the next group to review. Below are sample prompts to guide their critique. Other starters might focus more specifically on language used or methods of solving.

I enjoy this method because....

I disagree because....

I am unclear about....

One question I have.....

In the second round, students may respond to the responses on sticky notes or to the original problem-solving methods. Once each group has rotated to 2-3 posters, allow the original teams to read the feedback and consolidate their thinking as a team. The team will have the opportunity to make any adjustments to their solution as informed by the peer feedback. During the whole class debrief, direct groups to compare the problem solving methods, discuss common mistakes, and support the validity of their strategy.