Collect and Display
(Math Language Routine 2 – MLR 2)

Background

The eight Math Language Routines, or MLRs, are part of the Illustrative Math® (IM®) K-12 Math curriculum. This curriculum has been adapted for adult learners and can be accessed on the PA Adult Education Resources website. The MLRs provide the chance for students to reason, communicate, and strengthen their understanding in a collaborative and supportive environment.

Zwiers et al. (2017) identify four design principles that guide mathematical language routines:

- Supporting sense-making
- Optimizing output
- Cultivating conversation
- Maximizing linguistic and cognitive meta-awareness

For more information, visit Math Language Routines: Discourse with a Purpose.

Purpose

This MLR captures students' ideas, strategies, and language through class discussion. Students share while the teacher records the conversation using words, phrases, and visuals.

Goal

- Students record the language they use in discussion to develop their mathematical vocabulary.

Audience

- Intermediate to advanced English learners
- English learners transitioning to adult basic education classes
- Adult basic education learners

Supported Standards for Mathematical Practice

- **Standards for Mathematical Practice 3**: Construct viable arguments and critique the reasoning of others.
- **Standards for Mathematical Practice 6**: Attend to precision.

Materials

- A prompt or problem relevant to the current topic
- Student template

Procedure

1. Provide a relevant prompt or problem.
2. With a partner, in a small group, or as a whole class, students describe their understanding of and strategy for solving a problem.
3. The teacher records the words students use, the strategies they share, and the visuals they describe to explain their understanding of the problem and their strategies for solving it.
4. Organize and rephrase the conversation so students can refer to and build on it in future discussions.

Tips for Using this Routine

- Model the routine by demonstrating the process and thinking aloud.
- Model the routine by encouraging learners to provide additional information and clarification.
- During a unit of study, keep an easily accessible electronic record or hard copy of the Collect and Display. Refer to the record to review skills and connect new ones to prior instruction.
- If you would like support with implementing this routine from an instructional coach, email dschauer@tiu11.org.

Reference

Zwiers, J., Dieckmann, J., Rutherford-Quach, S., Daro, V., Skarin, R., Weiss, S., & Malamut, J. (2017). *Principles for the design of mathematics curricula: Promoting language and content development*. Understanding Language/Stanford Center for Assessment, Learning, and Equity. https://ul.stanford.edu/sites/default/files/u6232/ULSCALE_ToA_Principles_MLRs__Final_v2.0_030217.pdf ul.stanford.edu