Mobile Lesson

Goals/Objectives/Outcomes

- Assist participants in understanding a mathematical task that offers access to all students because it allows for intuitive strategies in solving the puzzles.
- Discuss the method of using different techniques when using low threshold, high ceiling activities.
- Define for and help participants recognize the mathematical habits of mind and how they show up for educators and students.

Discussion Questions

- How does working with group-worthy problems support the development of academic language?
- Why is it important for students to see themselves as mathematicians?
- How can you use this mathematical task as a bridge to help students deepen their prior knowledge?

Mobile Puzzles

1. Guide participants to solveme.edc.org to view some demos of mobile puzzles.
2. Groups of five are ideal for this task, because puzzles come in groups of five.
3. In any given round, each colored shape retains a consistent value but could change from one round to the next.
4. Share the following instructions with the whole group.
   a. Each participant in a group should have one of the puzzles in a set. Each sheet has information on it that is critical to solving the whole puzzle. Determine whatever information you can from your sheet and work with others in the group to find the value of each shape.
   b. When you've solved for a value, explain it to your group to see if they agree with your solution.
   c. When the group has completed all puzzles in a set, they should move on to the next set of puzzles.
   d. Participants should keep notes of strategies that work, problems that arise (and if they can identify what led to the

Materials

- Mobile puzzles (see handouts)
- Markers, pens, pencils
problem, great!), and group dynamics (e.g., does one person take the lead, dominate the talking, take other people’s puzzles, not give ample time for everyone to work on their on puzzle?).

Mobile Puzzles Discussion

When groups have had time to complete at least one round, they will have table discussions prompted by the following questions. The last task will be for them to answer and share out to the whole group.

a. What were your initial reactions?
b. What is the mathematics of this task?
c. Why is this less intimidating than typical approaches to systems of equations?
d. What else supports the accessibility of this activity (e.g., for special education or minority students)?
e. What makes this task relevant?
f. How can this task create a mathematical bridge from what students know to deeper knowledge of systems of equations?

Whole-Group Share-out

While no task will do this universally, to what extent does this task support equity? Explain your answers with support from previous readings, and use concepts/keywords learned in these immersion meetings.