Practices for Orchestrating Productive Math Discussions

Margaret S. Smith & Mary Kay Stein, NCTM & Corwin Press, 2011  www.nctm.org

1. Anticipating
   - Do the problem yourself
   - What are students likely to produce?
   - Which problems will most likely be the most useful in addressing the mathematics?

2. Monitoring
   - Listen, observe, identify key strategies
   - Keep track of approaches
   - Ask questions of students to get them back on track or to think more deeply

3. Selecting
   - CRUCIAL STEP – what do you want to highlight?
   - Purposefully select those that will advance mathematical ideas

4. Sequencing
   - In what order do you want to present the student work samples?
   - Do you want the most common? Present misconceptions first?
   - How will students share their work? Draw on board? Put under doc cam?

5. Connecting
   - Craft questions to make the mathematics visible.
   - Compare and contrast 2 or 3 students’ work – what are the mathematical relationships?
   - What do parts of student’s work represent in the original problem? The solution? Work done in the past?