**Intake: A teacher development activity**

In classrooms where the mathematical authority resides in students, students work together to make sense of mathematical ideas, and teachers elicit and use student ideas to facilitate meaningful math discourse and pose purposeful questions. These effective teaching practices require that the teacher know the range and frequency of mathematical ideas in the classroom, so that she can make informed decisions about what ideas to bring forward, in what order, and by whom. Intake is impacted by multiple variables - time, number of voices, modalities (e.g. voice, writing, gestures, etc.), and depth of idea being shared. To make these decisions in-the-moment, the teacher must take in a flood of concurrent incomplete (often incoherent!) student utterances quickly. It requires practice to build this intake muscle.

Practicing Intake within the *Contemplate then Calculate* Instructional Routine

There are three places in the *Contemplate then Calculate* routine where the teacher is positioned to intake.

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Time</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Launch Routine</td>
<td></td>
<td>Think and reason structurally</td>
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<tr>
<td>2</td>
<td>Notice, Individual Think Time, Pair, Share &amp; Record</td>
<td></td>
<td>Listen to pairs for key noticings and watch for gestures that indicate noticings. Ideal: know which noticings you want shared, by whom, and possible order.</td>
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<tr>
<td>3</td>
<td>Pair, Develop Shortcut</td>
<td>30-60 seconds</td>
<td>Listen and watch gestures for range of shortcuts. Ideal: Know the range and frequency of shortcuts in the room, which ones will be shared, in what order, &amp; by whom.</td>
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<td>4</td>
<td>Share, Discuss, &amp; Annotate</td>
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<tr>
<td>5</td>
<td>Reflect on Your Thinking, Individual Write Time, Pair, Share &amp; Record</td>
<td></td>
<td>Read and listen for key learnings. Ideal: Know which learnings you want shared, and by whom.</td>
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Part 2 Pairs share noticings
Time: 10-15 seconds
Listen to pairs for key noticings and watch for gestures that indicate noticings
Ideal: know which noticings you want shared, by whom, and possible order.

Part 3 Pairs develop shortcuts
Time: 30-60 seconds
Listen and watch gestures for range of shortcuts
Ideal: Know the range and frequency of shortcuts in the room, which ones will be shared, in what order, & by whom.

Part 5. Individual written reflection, partners share reflections
Time: 1-3 minutes
Read and listen for key learnings
Ideal: Know which learnings you want shared, and by whom.
Preparation.
- Understand the mathematical goal
- Consider task, anticipate student noticings, shortcuts, and learnings
- Determine which part of the routine you will “drop into” to practice intake

Roles:
- Teacher. One person is selected to play the teacher. He or she will be practicing intake.
- Students. Remaining group members play student roles in the routine.
- Facilitator. Begins and stops action, monitors timing, facilitates reflection, and offers observations regarding the teacher’s intake process.

Activity
1. Drop into the routine and begin. Facilitator monitors the “students” and stops action when pairs have completed their task (i.e. shared noticings (part 2); developed 1 or 2 shortcuts (part 3); shared their written reflection (part 5)).
2. Facilitator prompts the teacher to reflect on their intake.
   a. Did you hear key noticings you want shared in the full group?
   b. Did you hear student shortcuts? Do you know the range of shortcuts in the room? Do you have a sense of which shortcuts are most/least prevalent? Do you know which shortcuts you want shared and the order in which you want to share them? Do you know which students you want to share the shortcuts?
   c. Did you see/hear reflections you would like shared in the full group? Do you know which students you want to share those reflections?
   d. Are there pairs you did not hear?
   e. How did your physical positioning in the room help/hinder your intake?
   f. Are there student pairs you targeted first? Last?
3. Teacher redo. Repeat steps 1 and 2, asking student pairs to have a different conversation this time (e.g. share different noticings, shortcuts, reflections using different language)
4. Change roles and repeat the intake activity as time, energy and need permit.
5. Reflect on learning. Reflection prompts:
   a. The next time I am intaking student ideas I will…because…
   b. When intaking student ideas I have learned to ask myself…

Intake Pitfalls:
- Not purposefully positioning yourself before setting pairs off to share
- Staying with one pair too long, waiting until idea is fully formed
- Interacting with student partnerships