The most valuable resource that all teachers have is each other. Without collaboration our growth is limited by our own perspectives.

ROBERT JOHN MEEHAN

COLLABORATIVE LESSON PLANNING

THE KEY TO SUCCESSFUL LESSONS
REFLECTING ON GOOD TEACHING

Over the past two days you have had a chance to watch, analyze, and discuss video of classroom instruction (i.e., Amanda Smith -- Donuts Task; Millie Brooks -- Half of a Whole Task; Peter Dubno -- Counting Cube Task; Patricia Rossman -- Hexagon Train Task).

What do you think contributed to these teachers’ ability to support students productive struggle?
Good advanced planning is the key to effective teaching. Good planning “shoulders much of the burden” of teaching by replacing “on-the-fly-decision making” during a lesson with careful investigation into the what and how of instruction before the lesson is taught.

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Paige’s plan focuses on what she will cover during the lesson (pages 30–31 of the textbook) and what students will do (complete the warm-up and the assigned homework).

This “Post-it note lesson plan” shoulders none of the burden of teaching, and hence all of the decisions that Paige makes during the lesson will be “on the fly,” since she appears to have done little thinking in advance about the what and how of teaching.

Effective Mathematics Teaching Practices
“Building a Teaching Framework”

- Establish math goals to focus learning
- Implement tasks that promote reasoning and problem solving
- Build procedural fluency from conceptual understanding
- Facilitate meaningful mathematical discourse
  - Pose purposeful questions
  - Elicit and use evidence of student thinking
  - Use and connect mathematical representations
  - Support productive struggle in learning mathematics
Establish math goals to focus learning

Implement tasks that promote reasoning and problem solving

Build procedural fluency from conceptual understanding

Facilitate meaningful mathematical discourse

Pose purposeful questions

Elicit and use evidence of student thinking

Use and connect mathematical representations

Support productive struggle in learning mathematics
NOW YOU TRY IT!

• Find a partner or partners (no more than 3-4) who teach the same grade level or subject area with whom to collaborate.

• Determine what it is you want students to learn (not just want you want them to do) in the lesson you are going to design.

• Select a task that is aligned with you goal(s). Use either a task that you brought with you or one of the tasks in the packet we have provided. (Select a task that you are likely to use in a lesson you will teach this fall when school starts.)
Start by determining a clear goal for student learning.

Make sure the task you select is consistent with the goal.

### Learning Goals
What understandings will students take away from this lesson?

### Evidence
What will students say, do, or produce that will give evidence of their understandings?

### Task
What is the main activity that students will be working on in this lesson?

### Instructional Support—Tools, Resources, Materials
What tools or resources will be available to give students entry to—and help them reason through—the activity?

### Prior Knowledge
What prior knowledge and experience will students draw on in their work on this task?

### Essential Questions
What are the essential questions that I want students to be able to answer over the course of the lesson?

### Task Launch
How will you introduce and set up the task to ensure that students understand the task and can begin productive work, without diminishing the cognitive demand of the task?

### Anticipated Likely Solutions and Instructional Supports
What are the various ways that students might complete the activity? Be sure to include correct, incorrect and incomplete solutions.

What questions might you ask students that will support their exploration of the activity and bridge between what they did and what you want them to learn? These questions should assess what a student currently knows and advance her or him toward the goals of the lesson. Be sure to consider questions that you will ask students who cannot begin as well as students who finish quickly.
### Anticipated Likely Solutions and Instructional Supports

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<table>
<thead>
<tr>
<th>Correct and Incomplete Solutions</th>
<th>Instruction Supports (Assessing and Advancing questions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipating all the ways that students might approach the task, including correct, incorrect and incomplete solutions as well as impasses.</td>
<td>Write questions that you can ask that might support their exploration of the activity and bridge between what they did and what you want them to learn. These questions should assess what a student currently knows and advance them beyond where they currently are.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Possible Errors and Misconceptions</th>
<th>Instruction Supports (Assessing and Advancing questions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipating the errors that students might make and the misconceptions that might emerge as they work on the task.</td>
<td>Write questions that you can ask to assess what they understand and advance them beyond where they currently are.</td>
</tr>
</tbody>
</table>

### Sharing and Discussing the Task

<table>
<thead>
<tr>
<th>Selecting and Sequencing</th>
<th>Connecting Responses</th>
</tr>
</thead>
</table>
| *Which solutions do you want students to share during the lesson?*  
*In what order? Why?* | *What specific questions will you ask so that students—*  
*– make sense of the mathematical ideas that you want them to learn*  
*– make connections among the different strategies and solutions that are presented?* |

### Homework/Assessment

Use the monitoring tool to record your anticipated solutions and associated questions.
<table>
<thead>
<tr>
<th>Anticipated Solutions</th>
<th>Instructional Support</th>
<th>Who/What</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assessing Questions</td>
<td></td>
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<tr>
<td></td>
<td>Advancing Questions</td>
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<tr>
<td>Unanticipated Solutions</td>
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</tbody>
</table>
Dr. Goffney's Considerations for Equitable Teaching

Title/Objective: ____________________________________________

Key Math Vocabulary: _______________________________________

Mathematical Goals: _________________________________________

Mathematical Practices: ______________________________________

Problems to Pose: __________________________________________

Asking Questions: __________________________________________

Sentence Frames to Support Language: _________________________

B: _________________________________________________________

I: _________________________________________________________

A: _________________________________________________________

Smartness Strategies: _______________________________________

Participation formats with segments & times:
Whole __________ Small __________
Partner __________ Individual __________

Tasks:
Multiple Entry Points Y or N Multiple Solution Strategies Y or N

Representations: ____________________________________________

Manipulatives: ____________________________________________
What new thoughts about lesson planning do you have after spending the last two days with us?
“Sometimes it’s very time-consuming, trying to write these lesson plans, but it’s very helpful. It really helps the lesson go a lot smoother and even not having it front of me, I think it really helps me focus my thinking, which then [it] kind of helps me focus my students’ thinking, which helps us get to an objective and leads to a better lesson.”