



# Lesson Study

Process, Data Gathering, and  
Commentary



# Pre-conference

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- ❖ Purpose of lesson
  - ❖ Size of Geoboard
  - ❖ How that relates to further lessons
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# Data Collection

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- # Teacher dialogue
  - # Observation of identified students
  - # Student work
  - # Student journal entries
  - # 2 video cameras
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# Gathering Data/ Observing one student

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Right from the beginning she took a more active role. I'm going to try it. Now you do it. I'll hold the paper. She was always doing something today. Much more engaged. She had strategies to try, like take what partner did erase and copy what partner was doing or darken work. She was listening very careful. 85% of the time she still was not getting it. She hadn't finished. Then she watched Conner share, " these 2 match, these 2 match ." Her partner wrote equation.

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# Classroom Data-Reviewing Transcript

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## # Types of questions

- Probing
- Clarifying
- Checking for understanding
- Generalizing

# What is the name of the shape?

# What do you think? Are they the same?

# Do you agree? Can you explain what she said?

# Is this like any thing else we've seen?

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# Teacher Moves

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- # Misconceptions
  - # Use of seating chart
  - # Order of strategies
  - # Naming strategies
  - # Students explain other students work
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# Audience Questions -Number of rubber bands?

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- # If I give them more rubber bands, then they would like to use a lot. They would make too many parts. That doesn't lead to simplest way. Somehow they would need to do part from here to here, 1 by 1 matching instead of looking at the whole shape.
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# Team discussions

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- # Logistics
  - # Revision of the next day's lesson
    - Solution that didn't appear
    - Orientation of shape
    - Notation on square inch
  - # Reviewing student reflections
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# Use of white board

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- # Background information available
  - # Teacher controls story by writing
  - # Teacher controls pace
  - # Key ideas highlighted with color
  - # Strategies available for review and comparison
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# Anticipating student responses

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- ❖ Solutions anticipated in planning process
  - ❖ Keeps lesson focused and allows teacher to make on the spot decisions as lesson progresses
  - ❖ Knows the contribution to mathematical content to be gained from each type of response
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# A little secret-Follow the students

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Once you have spent so much time thinking and planning the lesson and the reasons behind all the moves, then the lesson starts and you let go of the plan. Everything is there, so you let go and follow the students. The lesson study develops a wide map of scope of what comes before and after, the lesson is just a product of the process of thinking about the whole unit and teaching. The most important part of the process is planning, not the actual lesson plan.

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# Aha's

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- # Teachable moment
  - # Divide in half, use comfortable vocabulary during exploration
  - # Opportunities to self correct
  - # Debate about what shape comes next?
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# Important Mathematical Ideas

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- # Importance of multiplication
  - # Having students generalize across solutions
  - # Pretend strategy - composing and decomposing shapes
  - # Conservation of area
  - # Justification
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# Professional Development

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- # Original sessions
  - # Video available for further discussion
  - # Have teacher's anticipate lesson design
  - # Analyze what moves helped further lesson
  - # Discuss the important mathematical content and how it can be built upon in further grade levels
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# Conclusion

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- # The Japanese lesson is whole class-child centered. It is focused on the students, paying attention to what moment they learn something without the teacher correcting. Students noticed something, then they can be influenced by peers or maybe sometimes by people other than the teacher.
  - # Students learn by contrasting or similarity to peers. They hunger for new ways to do things. The self-motivated is important for learning.
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