



MATH

Shift: Rigor

Practice(s): MP 3

Domain/level: Number Sense/Number & Operations

CCRS Math Teacher Workout

Let's Talk about Dots!

Time needed: 25 - 30 minutes

Goals:

Teachers will be able to:

- Identify a low-risk strategy for students to see math as patterns and practice speaking about patterns
- Articulate ways to encourage student sharing around math topics
- Consider the creativity present in math and how we might lift up this component of mathematical thinking

Materials

- ❖ Lesson plan and print-out of the dot cards:
<https://www.youcubed.org/wp-content/uploads/2019/08/WIM-Dot-Card-and-Number-Talks-Grades-K-12.pdf>
- ❖ Video: *Jo Teaching a Visual Dot Card Number Talk*:
<https://www.youcubed.org/resources/jo-teaching-visual-dot-card-number-talk/>

Introduction

1. Briefly (5 seconds) show one of the dot cards from the end of the Lesson Plan linked above.
2. Each participant silently identifies one way of describing how they knew the number of dots. (Without one-to-one correspondence)
3. Elicit from the group 2 or more ways we counted the dots. Attach the name of the person sharing with their strategy.



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Practice

4. Share the following discussion questions prior to watching the video in the next step:
 - a. How did the teacher accept and validate students' contributions?
 - b. How did she seek clarification to ensure she was representing their thinking accurately?
 - c. What mathematical thinking strategies are the students practicing?
 - d. How does this strategy build number sense in learners?
 - e. What else did you notice?
5. Watch the 5 min video linked above of Jo Boaler doing this strategy with a group of middle school learners.
6. Discussion of these questions in pairs/groups (or one group if small enough for productive sharing).

Wrap Up

7. Continue discussing:
 - a. What is the role of creativity in this task? Why is that important?
 - b. How can you use this strategy or one like it in YOUR setting?
 - c. How can this strategy be used for higher level math?
8. Share the filled out lesson plan linked above.
9. If time allows, take a look or offer a link to *Splat!*, which uses this strategy with hidden dots:
<https://stevewyborney.com/2017/02/splat/>