Common Core State Standards in the Classroom

Multiple Representations of Numeric Reasoning

An example from www.insidemathematics.org

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Overview

- Through a classroom example, we will consider the implications of the Common Core State Standards for Mathematics for our work
  - In our own classrooms
  - With other teachers
  - With administrators

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The Buttons Task

- Take a few minutes to individually work on the Buttons task, then discuss your approaches to parts 3 & 4 with a partner

Individual/Pairs

3

The Buttons Task

- With a partner, work on interpreting/ understanding the two student approaches to part 3

Pairs

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The Buttons Task

- What is similar and different in how Learners A & B see the pattern growing?
- What do you think the "3" represents in the solution for each learner?

Whole Group

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Context

- Grade 5/6 combination class; suburban SF Bay Area
- Students worked on Buttons previously; today they are analyzing two student responses to part 3
- In Clip #1 the teacher introduces the task of looking at the work of learners A and B, and pairs of students begin to discuss the responses.
- Clip #2 shows a whole group discussion where the teacher brings out some ideas from small groups' discussions of Learner B's response.

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Caveat

- The teacher and students in this video have given us a gift of providing this instance of practice for analysis. We are examining the practice, not critiquing the individuals.

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Focus for Viewing

- How are students making sense of the approaches of Learners A & B?

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Video Discussion

- How do students use two colors to show what is changing and what is staying the same for Learners A and B?

Small Group

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Video Discussion

- How do students use two colors to show what is changing and what is staying the same for Learners A and B?
- What evidence did you see of the Standards for Mathematical Practice in action here?

Whole Group

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Focus for Viewing

- What important mathematical ideas are being discussed here?

http://www.insidemathematics.org/index.php/classroom-video-visits/public-lessons-numerical-patterning/223-numerical-patterning-problem-2?phpMyAdmin=NqJS1x3gaJqDM-1-8LXtX3WJ4e8

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Video Discussion

- What important mathematical ideas are students discussing?
  - Consider the context of the colors in their representations as well as the discourse in the classroom

Small Group

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Video Discussion

- What important mathematical ideas are students discussing?

Whole Group

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Focus for Viewing

- What evidence do you see of the Standards for Mathematical Practice?

http://www.insidemathematics.org/index.php/classroom-video-visits/public-lessons-numerical-patterning/224-numerical-patterning-closure?phpMyAdmin=NqJS1x3gaJqDM-1-8LXtX3WJ4e8

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Video Discussion

- How might this mathematical experience provide opportunities for students to engage with:
  - CCSS Mathematics Content Standards?
  - Standards for Mathematical Practice?

Whole Group

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Connecting with the Common Core State Standards

- Our work so far with the Common Core
  - Yesterday
    - Examining the Standards for Mathematical Practice
    - Using a mathematics task and classroom video to consider the Standards for Mathematical Practice
  - Today
    - Examining a slice of the middle school standards → expressions and equations
    - Considering alternative pathways/compacted curriculum
    - Considering content standards and standards for mathematical practice through a mathematics task and classroom video

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Connecting to the Common Core State Standards

- How do these experiences deepen your understanding of and provide illustrations of the CCSSM?
- How might our experiences to date help you think about CCSSM implementation?
  - For yourself?
  - For teachers with whom you work?
  - For administrators with whom you work?

Small Group

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Connecting to the Common Core State Standards

- How might our experiences to date help you think about CCSSM implementation?
  - For yourself?
  - For teachers with whom you work?
  - For administrators with whom you work?

Whole Group

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Common Core State Standards: Appendix A

In terms of Curriculum:

High School uses Courses

K- 5 has Grades

Middle School has both!

Common Core State Standards: Appendix A

CCSS emphasizes rigor.

CCSS values high expectations.

CCSS impact on Middle School Content…

Common Core State Standards: Appendix A

Impact on Middle School Content:

- Two Levels

Common Core State Standards: Appendix A

Implementation Plan

Action Steps: 2011- 2012
2012- 2013
2013- 2014

Common Core State Standards: Appendix A

This is the work for every district.

Create a plan beginning with your non-negotiables.

How will we close the "Aspirations-Tolerance Gap"?